

A SOCIAL APPROACH TO ECONOMICS

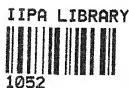
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To
G. E. L.
and
G. L. I.

PREFACE

THIS book is directed primarily to the needs of Canadian university students. The authors feel that economics cannot attract and hold the attention that it deserves when the record of industrial development and the application of principles have no special reference to the country in which the prospective readers live. Interest centres naturally on the home problems and the functioning of the social organization in the home country. To Canadian students, therefore, the authors make this offering in the hope that its message may be brightened and fertilized in the light of the familiar.

Canadian economic development, however, has been so closely integrated in many phases with that of the United States that description and interpretation have carried us of necessity over the border and involved us in lengthy excursions into the economic experience of that country. It is scarcely possible to convey a satisfactory message concerning the significance and the quality of the modern corporation, the changing nature of competition, the operation of central banking, or the functioning of a great labour movement, while confining attention to the Canadian scene alone. Such topics again as consumers' co-operation, arbitration of industrial disputes, and experiments looking to the remedy of social insecurity, carry us even further afield to England and Australasia and Europe for their best expression. Many of the chapters, moreover, notably those concerned with pure theory, are especially applicable to no particular country or countries but are as wide as the spread of capitalism and commodity exchange based on a system of pricing.

While directing our message thus to the university student we have not been forgetful of the general reader. While aiming at logical presentation and student appeal we have endeavoured as far as possible to keep within the range of interest of the mature mind. Likewise we have sought to strike a fair balance between institutional and price economics and have neglected no part of the functioning economic order.

Most of the material of the book has been used for several years in mimeographed form as an introductory text at the Uni-

versity of Western Ontario and has served during the past year in the same role for a class in the University of Toronto. During the summer of 1939 the whole has been thoroughly revised and supplemented. The majority of the chapters are the work of Mr. Logan the senior author. Mr. Inman has written Chapters XII-XIV. Chapters XX, XXI, and XXIII are their joint product.

We desire here to acknowledge our debt to many who have assisted us. Deserving particular mention are: Mr. Benjamin Higgins of the Graduate School of Public Administration, Harvard University, and Mr. Edward J. Fox of the Department of Economics, University of California, for valued suggestions; Professors E. E. Reilly and W. B. Harvey of the University of Western Ontario, Professor Gilbert Horne of Assumption College, and Professor Albert Moellman of Waterloo College, for comment and criticism as teachers of the material; Professor D. C. MacGregor of the University of Toronto and Mr. J. D. Gibson of the Bank of Nova Scotia, for assistance with the statistics; Professors C. A. Ashley and J. F. Parkinson of the University of Toronto, for constructive advice on Chapters VII and XXIX respectively. Especially are we indebted to Professors V. W. Bladen and H. A. Innis of the University of Toronto, to the former for reading, criticizing, and improving the chapters on theory, and to the latter for editing and suggesting reorganization of the earlier part of the book as well as for guidance in reading and for assistance with bibliography. We wish to express to R. Craig McIvor, B.A. of the Graduate School of the University of Chicago, our appreciation for making the index, and to Miss Alison Ewart, General Editor of the University of Toronto Press, for untiring zeal as editor. Finally we would thank Dean K. P. R. Neville of the University of Western Ontario, for encouragement and for provision of stenographic assistance, and Miss Mabel Hynd for patient performance in retyping and stencilling successive revisions of teaching copy.

H. A. LOGAN
M. K. INMAN

Toronto, 1939.

PREFACE TO THE SECOND EDITION

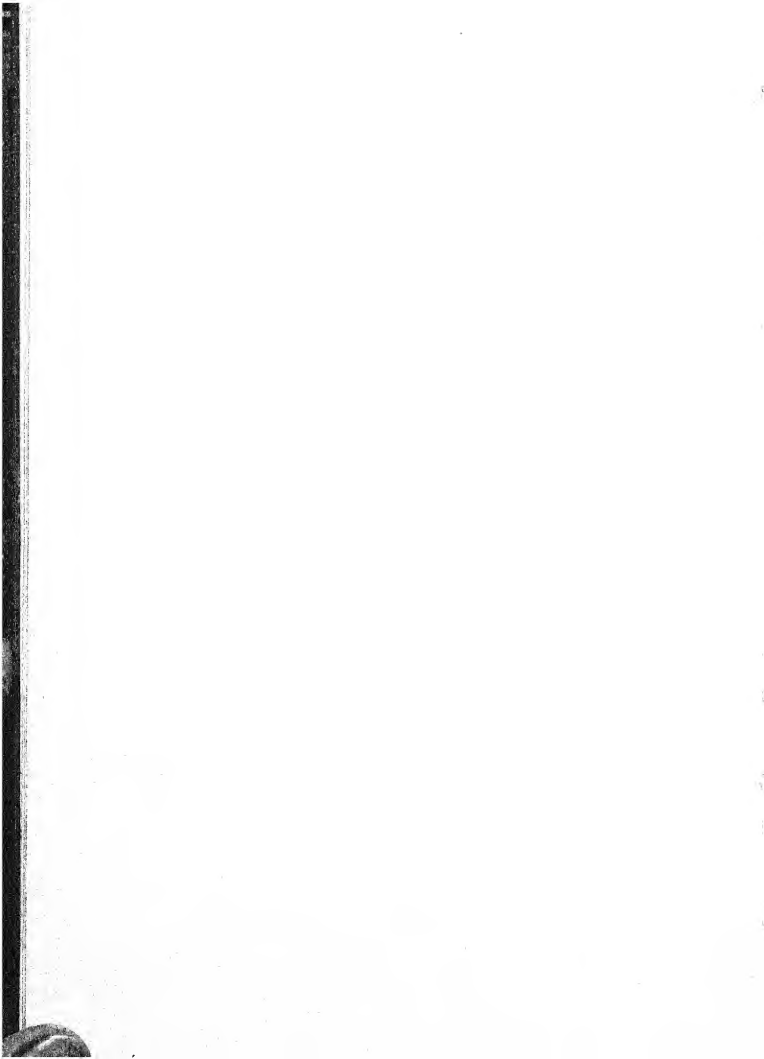
NINE years ago we offered our first edition to the Canadian public, and across the whole period the response has been most gratifying. Altogether, results have confirmed our former opinion that there is a place in our universities for a general text in political economy designed to introduce the reader to the whole field. Much has happened, however, in the nine years, and it has been increasingly apparent that our book was becoming inadequate especially with respect to the more dynamic phases of the economy. New emphases in theory too have accompanied the changing scene and there have been shifts in the definition and the alignment of problems. With the finish of the War therefore and completion of the transition to the normal conditions of peace the time seems ripe for a new edition.

Revision, as might be expected, has involved more fundamental changes in some matters than in others. Two new chapters (IV and XXVII) have been added dealing with the national income and the problem of full employment. The chapters on money and banking, public finance, international trade and its regulation, wages, and labour problems have been largely re-written. A section on socialism has been introduced early in the volume for purposes of comparison. Other parts, while brought up to date, are less vitally altered. While giving some space to the new expressions of state control that characterized the War and its sequel we have not seen fit to labour at great length the pattern and the functioning of government war orders-in-council.

We would express our thanks a second time to the economics staff of the University of Western Ontario and affiliated colleges, and anew to Doctors G. A. Elliott and W. C. Hood of the University of Toronto, and Professor R. C. McIvor of McMaster University. The carefully prepared index is the work of William H. Merritt, M.A., of the University of British Columbia.

H. A. L.
M. K. I.

Toronto, 1948.



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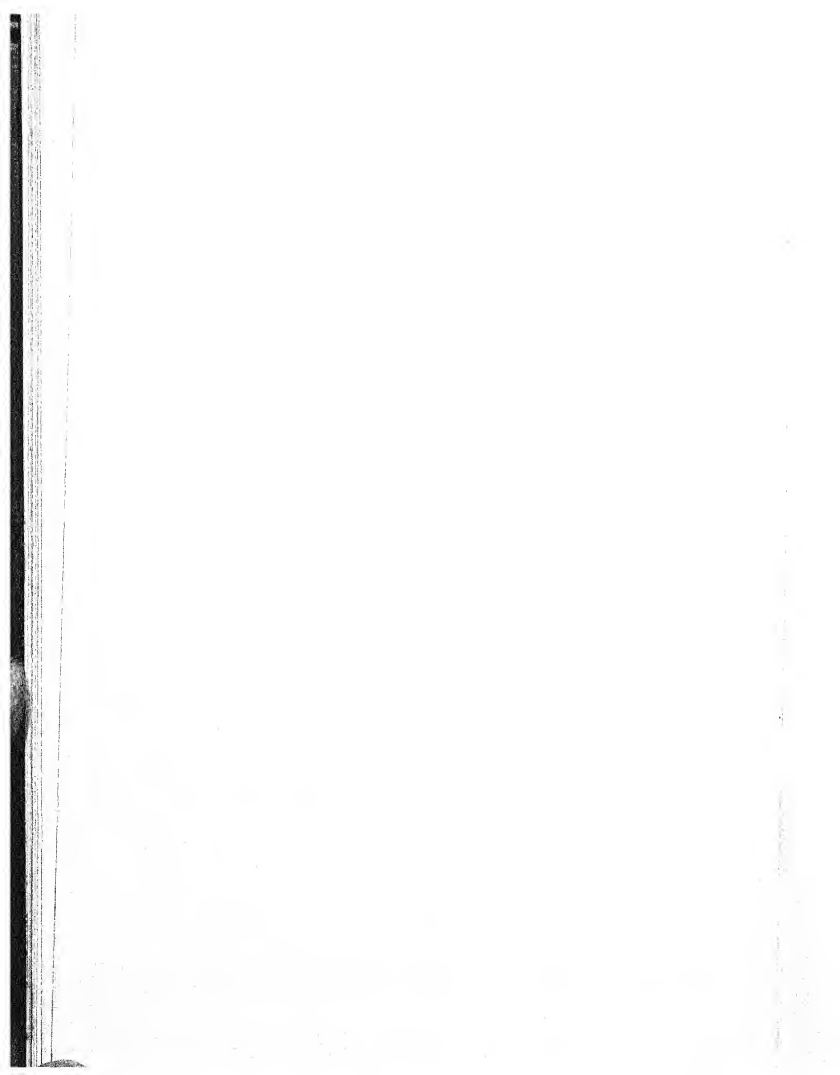
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CHAPTER I

CHARACTERISTICS OF OUR ECONOMIC ORDER

INTRODUCTION.—The purpose of economic effort is the satisfaction of wants. Putting it more elaborately—all economic phenomena have their origin in three basic circumstances. These are (1) that people have wants, (2) that goods are necessary to satisfy these wants, and (3) that many goods are scarce, the reason being that their existence depends on resources which themselves are scarce. How man living in modern industrial society exploits these resources, how he organizes to make a more effective attack on them, how he creates out of them the goods which he finds essential to his way of life and distributes them among his kind—this is the subject-matter of economics.

The fundamental facts involving wants, natural resources, labour, wealth creation and utilization are common to men everywhere. The social arrangements on the other hand according to which men command and exploit resources, and produce, distribute, hold, and enjoy wealth, have changed greatly among contemporary peoples.

Our first two chapters are intended to provide the reader with a view of these social arrangements, and to illustrate their differences among peoples, even while conveying a message of the basic fact of production of wealth. In them are sketched in broad outline our own economic system as found today on this continent, and after that in briefer compass, for purposes of contrast, the main features of organization as projected by the democratic socialists. Thereafter are laid the foundations necessary for the differentiated study that occupies most of the book. The choice of material for the opening chapters is itself purposeful. It assumes that the centre of interest in economics is the functioning economic order.

Our Economic Order: How the Consumer Makes Known his Wants.—The social purpose of all economic endeavour being the satisfaction of wants we may look first for the ways and means—organization perhaps—through which the consumer makes his wants known. The individual and the family as represented by

its purchasing members, are the two chief units for making choices of goods, and the same two, more especially the individual, are the significant units for enjoying them. The individual buyer or shopper buys with the telephone or perchance the mail order catalogue or face to face with the merchant or salesman as the final representative of the production process. The consumer registers his wants through individual approach to the market, and through the market the producers learn his desires and govern their action accordingly. There is organized effort in the form of advertising and salesmanship to influence him in making his choices, but this comes from producers who are interested in selling their goods to him.

Our Productive Organization: The Place of the Middleman.— Standing next to the consumer in the unconscious assortment of personnel in the economic set-up are the middlemen, consisting of merchants—wholesalers and retailers—salesmen, brokers, commission men, etc. Organization here is varied. Many middlemen stand as individuals doing business "on their own." In some instances, especially in small retailing, the family is the operating unit. Then, there are many minor "firms" doing business on a local basis but affording employment to a small group of workers and frequently combining the activities of two or more persons as leaders and executives. Catering to a wider area of consumers and attempting to meet a wider range of wants are the department stores, while reaching out beyond these and carrying their goods to within easy reach of the people all over the nation are our chain store systems and mail order houses. The middleman is, in the first instance, a link connecting the consumer with the farmer, the manufacturer, the mine operator, etc., who stand farther back in the productive process. We wish to present him as serving to organize the market for goods, to convey information concerning wants back to those who are accountable for planning and shaping the goods so that they may know what to produce, and how to place the goods within reach of consumers. Standing in a position where he feels the impact of those who want goods, on the one hand, and those who supply them, on the other, he interprets these forces into prices which have so much to do with controlling our whole economic activity.

General Aspects of Productive Organization.— Production may be considered from three points of approach. In the first place, we find it arranged in individual plants or technical pro-

ductive units such as factories, stores, workshops, and farms. In the second place, we find it organized by business units which may or may not correspond with plant formation. In the third place, it is tied together and interrelated according to broader lines of economic organization, as where farmer and merchant collaborate and assist each other through their exchanges of products, or where the banker plays his part in financing the manufacturer.

The Industrial Plant.—Within the individual plant or industry we are impressed first of all by the division of labour that we find there. Nobody is producing anything in particular under the guidance of his own brain (we are speaking, of course, of the larger industry), but all are tied together in a common social effort where the planning and arranging of the separate tasks are done from the office. Production, therefore, is simplified, mechanized, and, in a sense, made unhuman so far as it concerns the individual worker. On the other hand, it is effective from the standpoint of product. The whole organization moves on like clockwork, or, better, like an army marching forward under sealed orders.

This division of labour assumes the use of a great quantity of machinery. By use of machinery man has brought to his aid the forces that are found in nature. The steam engine burns coal, the gas engine burns petroleum, the power plant on the river generates power which is turned into electrical energy; but in every case the fundamental result is the same. Man has succeeded in harnessing nature and by using this power upon the various mechanistic devices in factory, mine, or construction work, he has developed, in the last two centuries, an industrial technique unlike anything existing heretofore. Machinery came first to the mine and factory; then it transformed transportation, and it has proceeded at different stages to make its impress upon agriculture. Through it the accomplishments of science are brought to bear upon industry. Today the larger industrial firms have their own research laboratories and employ technicians who are experts in science. Although all production is not given over to machine methods, machine industry is characteristic of our system. Machinery largely dominates modern industry. Enterprisers cannot enter competition without it. Production moves in accordance with the conditions of its effectual operation. Men are assembled in numbers qualified to attend it. They are chosen with regard to their fitness to handle it. They are made to step in time with it, and they live in the presence of its throb and its noise.

Associated again with both of the characteristics that we have named is a third, viz. large scale production. Machinery cannot be used to advantage unless the output of the plant is comparatively large, nor can division of labour reach its maximum efficiency without the use of a considerable number of men and an opportunity to give free rein to specialization. Large industry can produce more cheaply than small industry in most lines of manufacture and transportation. Consequently, small plants have disappeared from some industries in the competition and large ones possess the field.¹ The same is not as true of agriculture and merchandising, but of these the latter is divided, and at present seems trending toward the large scale methodology.

Our Differing Business Units.—Production is carried on chiefly for sale and is organized and run by *business units*. In some instances the business unit may correspond in size with the individual plant. It may be concerned with purchasing the materials for, and fabricating, and selling, the product of a single plant. In other cases it may operate a number of plants which, from the point of view of technical production, may be considered as separate organizations. But, in any case, the business unit is to be considered in a category distinct from plant organization. The one is concerned with production technique; the other is concerned with profits for the business and stresses buying and selling.

The business unit embraces corporations, partnerships, individual enterprises, co-operative societies, and governments where they participate directly in productive enterprise. Corporations are legal creations doing business according to terms laid down in their charters which are granted to them by government. They use funds, which for their initial operations at least, are gathered from a wide range of investors through the sale of shares in the business. For subsequent "working capital" they turn to the specialized financial institutions, the commercial banks. Apart from governments they are characteristically the unit for large organization. They dominate the field in manufacturing, rail and water transportation, mining, and finance.² Partnerships are not creations of the government but exist on a basis of private contracts. They are

¹For a qualification of this trend, see E. F. Heckscher, "Recent Tendencies in Economic Life" in *The World's Economic Future* by Alexander Loveday *et al.* (London, 1938).

²The situation is somewhat different in Great Britain. See A. Marshall, *Industry and Trade* (New York, 1919), pp. 308 ff.

found chiefly in merchandising and among the professions. Usually they do not operate on such a large scale. Individual or one-man enterprise dominates in agriculture and is important in merchandising, repair enterprises, and the professions. Co-operative ventures are most significant in the mercantile field, where they feature sometimes in selling, sometimes in buying. Among farmers attempts are made to sell certain products on the co-operative basis, and among consumers to buy their merchandise to avoid paying the middlemen's profits. Other forms of organization which play a great part in assisting the buying and selling of services, are trade unions and employers' associations. Corporations again are locked together by various devices and almost literally one is piled on others for purposes of controlling their activities toward common ends. By this means there has been brought about great concentration of control over production at the same time as there is wide ownership of industry through diffusion of individual shares of stock. This, naturally, is a condition subject to abuse and many problems of exploitation and injustice have their origin here. Society acting largely through government has long sought to find ways and means of correcting these abuses, but with only a limited degree of success.

Broader Aspects of Economic Organization: Exchange Economy.—Ours is an exchange economy. Most things that are produced today are intended for sale and most things that are consumed purchased from someone else. The farmer feeds a large part of his crops to his own cattle but when the cattle are matured they will be sold or their milk or butter will be marketed. The corn and hay were produced for indirect, if not for direct, sale. Only when the producer uses his products for personal or family consumption, as where the farmer has bread made from his own wheat or where the shoemaker wears shoes made in his own plant, can we say there is no exchange involved. The significance of exchange is not likely to be appreciated unless we imagine the conditions in an economy where it is lacking. Let us picture a situation where there are no merchants and financiers. Practically everything used by the family is produced on the homestead. Not only are foodstuffs a matter of home production but garments are made at home from yarn spun from homegrown wool. Carding implements, and spinning wheels and looms are a part of the family's working outfit as much as ploughs and brooms, shovels and knitting needles. Shoes are cobbled at home. Many of the tools and a large part of the furniture are of

home manufacture. House and barns are constructed by the male members of the family though sometimes under the unpaid direction of a master builder in the community. Economic life, in such a situation, would be simple and crude but self-sustained. Wants could not be answered with the finesse and with the variety of goods that our system assembles. People would have to eat very largely in accordance with the season's offerings and dress with practical reference to the weather; they would have few luxuries for the satisfaction of the lighter and vainer wants. On the other hand, they would not be worried about prices and the future state of the market. When crops were sown they would be chiefly interested in getting an abundant harvest. They would have no difficulty in knowing what goods should be produced and in what quantity, as we have today. Economic planning would be simply a matter of directing the energies of the family within the range of its capabilities in the production of the goods most needed. What it could not produce it could not have.³

But with us, the goods of all the world are within our reach and the possibilities of varied and sumptuous living are beyond comprehension. Yet we must buy them. And in order to do this we must sell our own products and services, and sell them well. Our command over the goods that we desire depends upon the comparative price of these as against the prices we can get for ours. The farmer is interested in the quotations of wheat and butter and pork as much as he is in the quantity and quality of his crops. The housewife is concerned with retailers' prices of eggs and sugar and dress goods and finds it to her advantage to watch for special "sales." The merchant lives by margins between his buying and selling prices. All eyes are upon the market. The market becomes, in a sense, the most significant institution in our economic order. What transpires there seems to dominate every other phase of activity. The consumer buys in accordance with the market. The producer decides what he shall produce or perchance holds back his product for sale at some later time. His wares, however, being produced in advance of the market, may not be indefinitely withdrawn. If he has produced large quantities at great expense and then finds the market

³It is a mistake to assume that this is a description of the economy of our pioneer ancestors in America. They were never out of contact with Europe and were always price conscious. See H. A. Innis, "The Penetrative Powers of the Price System" (*Canadian Journal of Economics and Political Science*, vol. IV, Aug., 1938).

permanently weak, he will eventually have to sell at a loss. The exchange economy, therefore, introduces a type of risk unknown to a self-sustaining economy. This, in fact, is one of its most important characteristics. Prices move up and down in relation to each other. Sometimes they move upward or downward rather generally, but at varying rates of speed. All this means uncertainty and chance to the degree that men may fail to estimate correctly these coming changes. It means, furthermore, the opening of a great gap between productive effort and reward. People who have striven hard in producing commodities find the market so weak that they are forced into bankruptcy, while others working no harder and apparently with no greater deserts, meet with a rising market and make fortunes. This condition of risk again has led to the rise of a class of men known as speculators who live in whole or in part through buying and selling and holding for a time the title to goods in the hope of making gains through changes in price. But practically everybody today is in some sense a speculator. If he holds goods he speculates and every producer is a holder of goods in some form. If he buys durable goods he is taking a chance in that he might have obtained them cheaper tomorrow.

Exchange takes place, furthermore, so far as many goods are concerned, over very wide areas. Some markets, such as those of wheat and cotton, are practically world markets. Producers from all continents offer their wares in competition, and consumers everywhere make their choices of products. Earlier economic systems have exchanged their wares in markets, but they were markets unlike ours in respect to area covered, variety of goods dealt in, and manner of buying and selling. Ours is probably the first exchange economy wherein the process of exchange is carried to the point of dominating all else.

Localization of Industry.—The exchange of goods, and the organization of distant markets are accompanied by localization of industry. Not only are wheat and cotton localized in large degree owing to climatic and soil conditions, but also manufacturing industries producing goods such as steel, automobiles, textiles, and flour are centred in a comparatively few areas. This is possible through our modern system of transportation and storage. Goods move by rail, by ship, by motor lorry, and even by air to be sold in distant markets. As consumers, we no longer are as seasonal in our habits or as confined to local production as our forefathers were under other less effective transportation devices. We eat fresh oranges

and vegetables the year round, and consume dairy products that were produced at a great distance.

Money, Price, Finance Capital.—An elaborate system of exchange involves the use of some device for comparing the values of all the commodities dealt in. This device is money. Through it the values of all things are brought to a common denominator and expressed as prices. Wages are not only paid with money but they are measured by money. Likewise goods are exchanged in accordance with their respective prices, i.e. their values expressed in money, and are measured in turn against wages. Money is thus our universal measure of value.

While money is a common denominator of values, price acts as the measurer of our ends or purposes. A thousand and one different purposes each involving economic costs compete for fulfillment in the life of each family. All alike require the utilization of scarce resources. A price of ten dollars settling on one commodity indicates that the purpose fulfilled through it is twice as important to the buyer as that fulfilled through a commodity with a price of five dollars. Society, in the double role of consumer-producer, is willing to utilize twice as many resources upon it.

Our elaborate exchange system has come to embrace, furthermore, not only material commodities and personal services and money in the senses just explained but also a trading in finance capital. This operates through an unconscious co-operation of persons or groups each playing his specialized part. One group we call savers. They do not use all their income but put some of it by, usually depositing it in banks. The banks in turn lend money for periods of time to merchants and manufacturers and consumers in need of funds who in turn *invest* or use it in producers' or consumers' goods or in paying wages of employees. Sometimes in place of the bank, the loan and mortgage corporation or the insurance company stands in the middle relation between saver and borrower. In other cases the dealing may be direct as where an individual buys bonds of an industrial company out of his personally controlled savings. Our concern just now is not, however, with the varied channels but with the content of the flow. Money, because it is always acceptable in exchange, will command all other commodities and services at any time. This process of transferring it means, therefore, the transfer of control over commodities generally—whether resources or consumers' goods—from one set of people to

another. With it goes the right to decide what goods and services shall be used and how.⁴

Coming into the hands of producer-borrowers its use is defined in relation to the purposes of various firms, and its power for adding to society's productive strength is vastly increased. Coming to consumer-borrowers it makes possible an increase in their capacity to buy goods now at the expense of the future when they will have to repay the loan. Contrariwise in both cases it restricts the saver in his expenditures in the present but increases his power to expand them in the future when the funds are repaid. This temporary transfer of finance capital with its highly liquid quality of general purchasing power is a most important characteristic of our economy.⁵ Its exchange involves a price known as interest.

Roundabout Production.—Production involves the use of *capital goods*. These involve not only land but man-produced things—tools, machinery, factories, railways, barns and cattle, and the raw materials of industry. Capital goods are set off from consumers' goods because their function is to further production and not to give direct satisfaction to people. Distinction is made again between *circulating capital*, which, for our purposes at present, we may identify with the materials of industry—the goods in process—, and *fixed capital* which is typified by machines and barns and factory buildings—goods which play their part in production, usually in respect to a succession of products, without losing their own identity in so doing. Circulating capital is, of course, vital to every economy. In our system it is characterized by a separation of stages—as goods proceed from the raw to the finished state. But more noticeably our system is peculiar for its employment of great varieties of fixed capital, notably machinery and plant. This emphasis upon the intermediate assisting forms means that energies are expended indirectly and a long time in advance of the sale of the ultimate or consumers' goods. Capital forms, furthermore, are increasingly serviceable in the production of only one type of consumption goods, and if anything happens to spoil the market for the latter before they are completed, the capital goods thereby become useless. Such production involves additional elements of risk. Fluctuations in consumers' demands mean uncertainty where

⁴Some modification of this statement applies in some cases where the loaner retains some control over uses.

⁵Elements of expansion in the amount of finance capital beyond the original savings must be left for future discussion. See chapter on Interest.

production is carried on in advance of actual orders; but they are doubly unfortunate in a society using great amounts of fixed capital. Fixed capital and the time and risk required in the whole process have caused the direction of production to fall largely into the hands of certain specialized groups called entrepreneurs and capitalists, persons capable of assembling sufficient funds over a period of time and assuming the financial risk inevitably associated with changing conditions of the market, as well as more accurately gauging the demand. Others unable to meet these financial requirements must sell their services to those that can. The large use of capital, the concentration of industrial control, and the peculiar method of the selection of the directors of production, constitute, in part, what is called *modern capitalism*. The rest of it is to be found chiefly in the ownership arrangements which we shall treat hereafter.

Competition and Monopoly.—Our system is basically one of competition. In their appeal for patronage, firm competes with firm. They compete on the basis of the prices at which they offer their wares and also on the basis of quality and each tries to impress the consumer that his is the best offering of goods that is available.⁶ A large part of advertising and salesmanship is strictly competitive. It seeks to get as much of the market as possible for those firms that employ these devices. On the other side of the market, consumer competes with consumer for the choicest of the goods. Likewise, in the business relations of employers and employees, there is a basic competition. Employer competes with employer for labourers, and in their effort to command the best jobs workman competes with workman.

This is the traditional picture of our economic system as seen from the standpoint of its automatic direction and control. But here we must enter a qualification. Actually competition has come to be modified and restricted at many points. There are firms that have a monopoly in their product and others that have particular advantages that their competitors cannot hope to share. Some sections of industry are shot through with limitations on competition expressed through a variety of forms such as conscious sharing of markets, informal price agreements, and the like. A small number of firms produce the major part of many of the goods and services of this continent in manufacturing, transportation, and communication and an even smaller group of men control

⁶For the distinction between pure, monopolistic, perfect, and imperfect competition, see *infra*, chap. xvi. Cf. Marshall, *Industry and Trade*, pp. 395 ff.

their destinies. Both of these facts lessen the effectual working of competition. Employers again do not compete effectively for workers, especially in periods of unemployment and depression. Nor do workers always compete for jobs. Rather, the two sides unite into great unions and employers' associations and carry on collective bargaining involving the whole groups. How far monopoly and partially controlled conditions have encroached upon competition is very difficult to estimate. In some areas of industry it has been demonstrated that quasi-monopolistic conditions are the rule and competition the exception. In others, notably in agriculture and with unorganized labourers, competition is still dominant.

Nevertheless we continue to think of our system as competitive and to put our dependence on competitive guarantees. Mostly we assume that he who offers poor wares will not be able long to command his share of the market and he will lose business to his rival who offers better goods. The producer of good goods will expand; the producer of poor goods will be eliminated unless he quickly changes his ways. The same thing will happen where one producer offers wares, having no greater merit, at prices above his competitors. He will be weeded out and his business go to his rivals. Competition thus tends to guarantee to the consumer that the merchandizing function is always passing into the hands of the best merchants, that fabrication is always going to the most efficient manufacturers, transportation to the most efficient carriers, etc., etc. The economic order, in other words, is effectively organized through competition. Such is the philosophy that has accompanied our present economic activity and conditioning. When things go wrong we look to see what has happened to competition and mostly we seek remedy through restoring it or arranging anew the conditions under which it shall operate. Recently there has been some change in this attitude as indicated by various pieces of legislation.

Our system again is a bargaining system. Every exchange, while it may be helpful to both parties, involves an opposition of interests. The farmer and the manufacturer strive for as high prices for their products as possible; the purchasing wholesaler tries to get them for less. The worker does his best to raise wages; the employer seeks to lower them. This "competition across the market" is also an organizing influence and a guarantee to all parties upon which we rely. The satisfactory working of an exchange system depends on the reality of bargaining competition as well as

upon the rivalry of competitors on the same side of the market. Some of our worst troubles in the post-war period have originated here, in that concentrated strength on one side of the market faced unorganized weakness on the other with the result that there has been no real bargaining but merely a one-way imposition of terms.

Freedom of Initiative and the Acquisitive Principle.—Freedom is left with the individual to determine what he shall produce or what he shall work at, as well as to choose what he shall consume. This freedom may be largely nominal so far as it concerns large sections of our population. Very few of us can choose to build railroads, enter into banking or insurance, or attempt automobile manufacturing on our own account; and many workers are in such a condition of need that they are helpless to do anything other than work at the first job that offers. For most persons, however, possibilities of choice open at some stages of their lives. Within a limited range they make decision between one line of activity and another.

Where initiative by the individual stops, in this matter of determining what shall be produced, initiative by the larger business unit begins. Corporations in particular are more capable than individuals when it comes to undertaking the larger enterprises. As we have already explained, they are capable of commanding the funds necessary to provide sufficient capital. Further than that they are arranged to draw together the talents of experts and specialists of different kinds requisite to the successful exploitation of many large projects. In a very real sense it may be said they live a life of their own, having their own purposes, and their own definition of their task. What shall be produced in the way of automobiles on this continent next year, what kind of cars and how many, will be determined mostly by four great corporations rather than by you and me or even the thousands of individuals having some knowledge of, and liking for, automobile manufacture. The corporation is the locus of the intelligence that determines these matters in so far as it affects a large part of our products. Freedom of initiative seems in a measure to have left the individual and to have associated itself with these artificial creations. Such an expansion of the concept of freedom is, however, largely a contradiction in terms—a denial of the substance.

The guiding principle which furnishes the basis of action in determining what shall be produced, and in what quantities and qualities, is the principle of self-interest, which in business terms

means profits.⁷ Interest in humanity, consideration for human needs, art for art's sake—none of these figures very strongly.⁸ In the simple economy that we have spoken of above, economic activity was guided directly by needs—the needs of each pioneer family, to be specific. Today it answers to no such principle. Goods are produced only to the extent that they yield profits or promise to minimize loss. There may be many people that need such goods and that badly enough, but that constitutes no effective business argument for further production.

The profit motive, furthermore, does not stop with the individual initiator and controller of production. It extends to the corporate producer. Acquisition in terms of money is the purpose of its activity. The only distinction seems to be that here the actor is impersonal and the possibility of our interpreting motive on any other basis than acquisition becomes even more remote. Corporations are organized to make profits and their human managers are servants with no right or authority to act otherwise than to bring maximum returns to the shareholder.

The guiding principle of modern business, we repeat, is acquisition through profits. Production is carried on as incidental to this purpose. This may mean producing to the full limit of plant capacity or it may mean much less. Corporations are free within the limits set by their charters to produce what they like, how they like, and as much or little as they like. Individuals are nominally free to do the same without limit save, of course, that set by the Criminal Code.⁹

⁷Motivation in production comes also from high wages, but direction comes only from expectation of profit.

⁸Some writers have stressed love of power and love of the game as powerful motives in modern industry. See, for instance, F. H. Knight, *The Ethics of Competition* (London, 1935). These must, however, be closely associated with profits. Games usually are not played without keeping the score.

⁹For stimulating discussion on the substance of liberty enjoyed through preservation of individual rights as contrasted with that achieved through positive re-creation of institutions to this end, see John Dewey, *Liberalism and Social Action* (New York, 1935).

CHAPTER II

OUR ECONOMIC ORDER—(Continued)

SOCIALISM BY CONTRAST

PRIVATE PROPERTY.—Our system rests upon certain legal foundations which have come down to us from the past. The philosophy back of these predicates a state of liberty or freedom as the natural and desirable lot of mankind, and insists upon the existence of a number of fundamental *rights*—the older term was “natural rights”—that must be guaranteed to every free person in order that he may enjoy the essential qualities of this liberty. The modern state takes it upon itself to maintain these guarantees, and through the agency of the law these various rights have received definition through a long process of application to the actual situations of social life. The rights that are significant for our purpose are those of property, inheritance or bequest, and contract. As developed and elaborated at the hands of the courts, the legislatures, and the makers of constitutions, they play their part as legal institutions. Their importance can scarcely be over-emphasized. They affect the quality of our living almost as much as wealth itself inasmuch as they have such influence over the conditions under which goods and services shall be produced, distributed, and consumed. Property may be defined as “the right of exclusive control within the legal structure of society over valuable things.” It involves the right to acquire, to hold, and to use without interference from outside so long as the possessor or owner acts within the law. Sometimes, in common parlance, we confuse it with wealth itself. The reader, however, should appreciate that property is not the wealth but merely the title to wealth. The evidence of property in land is the deed to the land, but neither the land nor the deed is the property. The property institution differs widely among different peoples. It differs greatly, for instance, so far as some kinds of wealth are concerned, between Canada and Russia. Ours is a system mainly of private property. Not only are consumers’ goods owned and controlled by private persons but the same is true of land and other capital

goods. It is true that we have some examples of state ownership as in the case of our municipal parks, our public buildings, some of our railways, and especially in our vast resources in crown land. Nevertheless the greater part of our active wealth is owned by individuals, corporations, and other less formal voluntary groups. Our traditional attitude has been that property must necessarily be private, as it is only thus that the individual can be guaranteed and protected in the enjoyment of the fruits of his own efforts and enterprise; and if he is not assured of these fruits, he may not be expected to put forth his efforts to the best of his ability. Private property in capital goods and capital funds is doubly significant because the ownership of these, involving as it does the right to say what use shall be made of them, carries with it the control over our whole system of production. What industry shall do, what forms and qualities of goods shall be turned out, what the millions of working-men and women shall labour at, and how, is largely determined by the owners of capital—within the limits, of course, of consumers' demand. This is a matter of vast importance. But the matter does not stop here. Private property has also a great bearing upon the distribution of income. Ownership of consumers' goods involves the right to use their utilities in the direct satisfaction of wants. Ownership of producers' goods carries the right to receive the incomes known as interest and rent, and thus gives propertied persons a great advantage in the amassing of wealth. Many persons today are bitter in their denunciation of private property for being a chief cause of what they consider to be artificial inequalities, and a social stratification that can never be characterized as just.

We may not leave our examination of private property without calling attention to the changed significance of the adjective "private" as compared with its meaning in the same phrasal connection a few decades ago. Private property then meant wealth held and controlled by individual persons, whereas today it means wealth held and operated in large part by corporations. In place of the exclusive rights over entire commodities, property has come to mean a diffusion of rights involving equities in the total wealth or income of the corporation. The "right to hold and use as one sees fit" is an expression that fails to bring out the reality of the situation where active control is distributed, as we shall learn later, to directors and managers and some types of stockholders while it is practically denied to others. For the most part property rights in a

corporation so far as they concern most of the individual "owners" is little more than the right to receive income. All of this is not without its bearing upon the concept of property as an incentive to productive effort, best use of resources, and the like.¹

Inheritance or Bequest.—Closely associated with the right of property is the right to bequeath—meaning to pass the property by will at one's death. Some writers treat this as an attribute of property itself but it seems advisable to consider it in a separate category. The power of disposing of property by will developed comparatively recently in most countries of Europe. The economic significance of inheritance lies in the fact that it tends to continue the controls over wealth, and the streams of income that have their sources in property, across the generations. It also has some bearing upon incentives to work and to accumulate, and, looking to the next generation, upon the wisdom of wealth utilization. People pass their wealth in large part to their own children and blood relatives who may or may not put it to the most economic uses. Today, there is a definite trend toward counteracting the force of inheritance through an increasing use of succession duties which are taxes calculated to capture some part of larger estates at the point of their passage.

The Right of Contract.—Whereas property involves the right to control wealth, contract involves the right to *deal in* wealth and services. The two have been looked upon as the pillars upon which natural liberty, in so far as it concerns wealth relations, must rest. In the constitution of the United States they are set up as *inalienable* and *inviolable* rights, whose merits no one may question. Freedom of contract asserts freedom to buy and sell goods and services, limited only by the equal freedom of others to buy and sell. No one may bar access to the market to any other where the latter wishes opportunity to buy or sell. He has the right to outclass him by offering fair competition, but he may not hold him out.² Contracts have been called the "connective tissue" that ties the separate persons and business units into an interdependent system. They are the basis of working relations between employer and employee.³ They define the conditions of the exchange of wares between farmer and merchant, between dealer and consumer. Sometimes, they

¹See article on "Property" in *Encyclopaedia of the Social Sciences*, ed. by E. R. A. Seligman (New York, 1930 *et seq.*).

²See *Reports under Combines Investigation Act* (Ottawa, Department of Labour).

³Increasingly important here is the bargaining trade union.

complete themselves immediately in the exchange of money and goods; sometimes they tie the parties together in a business relationship extending over months or years. Contracts once established must be carried out in accordance with the terms. The contracting party who fails to perform his part is subject to a suit in damages, and the full power of the State is placed at the disposal of the injured party in forcing the other to make good the injury once it has been decided upon by the courts.

The Place of the State in Modern Industry.—In our discussion of individual initiative and freedom of competition above, we may have left the impression that economic society operated entirely on a basis of free and voluntary action initiated and maintained by its separate constitutive units. This emphasis was laid advisedly because this, in fact, is the foundational principle of our order. It has developed on a background of what has been called economic individualism or liberalism which came in as the dominant social philosophy in Anglo-Saxon countries during the first century of the Industrial Revolution. On its negative side, as affecting the proper relation of the State to industry, it has been referred to as *laissez-faire*, meaning "hands off." More exactly, while not leaving the State out of the picture entirely, individualism has mapped out for it a necessary but narrowly limited and unostentatious part. The State, if we may use a sporting analogy, was charged with the important duty of laying down the rules necessary for fair play in a game where the players were to be left as free as possible. Having set the rules it became its duty thereafter to act as referee or umpire to see that all the players lived up to them and nobody fouled anybody else. It was not to enter the game as a player. To speak more directly, it was its task to make clear the conditions of property, contract, and competition and to interpret them in the particular situation. It was its duty to protect property, to enforce contracts once they were made, to prevent dishonesty, and to see that free and fair competition was maintained. If monopolies developed it was to break them up provided they showed a tendency to unfair practices or interfered with the guarantees associated with free competition. Only in cases where private enterprise is obviously inadequate to providing a desirable good or service should the State enter industry on its own account. It was not the function of the State to fix prices, or interfere with the natural working of trade or industry, or to attempt any control over what should be produced.

These we say are the assumptions according to which we have sought to shape the relations of the State to economic matters in our social order. But, in practice, this individualistic philosophy has never fully prevailed. During the recent war the State entered positively into economic activity in various ways, distinguishing essential from non-essential industry in relation to the war purpose, assisting in training and transferring necessary personnel, regulating prices and wages, and controlling foreign exchange. Much of this has now been dropped but it continues to legislate pure food and drug acts, to protect the consumer in the quality of goods and also against exorbitant prices in certain commodities and services such as those offered by public utilities. In some instances the State has undertaken production mainly in the interest of the consumer, as in the case of education, the postal services, municipal street railways, etc. The State exercises a control over monopolies and over banking. It sets up protective tariffs and offers bounties to preferred industries, and thus, interferes with trade. Various kinds of legislation again are calculated to benefit and protect the worker, and government boards and commissions are set up to see that they are enforced. Examples of these are our factory and mining laws, our minimum wage laws, and our workmen's compensation acts, the latter being intended to guarantee the worker against suffering the full burden of financial loss when he is injured while at work. Not everybody in our population, by any means, is favourable to all these forms of State activity. Some are free traders. Others argue that the worker and the consumer should be left to look after themselves in reliance upon the old guarantees of competition and the efficient production that must inevitably result from free enterprise.

Summary.—This then is the meaning of the economic order. It involves much more than the visible aspects that disclose themselves as factories, mines, and farms, and people working and consuming. It has to do with purposes and motivation, with indicators and controls, and, of course, it involves apparatus and techniques. *It is a system or totality of conditions and relationships which are in part industrial or technical, in part legal or customary, and yet again in part broadly economic, under which economic goods and services are brought into existence, distributed and consumed.*

CHARACTERISTICS OF THE SOCIALIST ORDER

Introduction.—Socialists have for more than a century brought an unrelenting criticism to bear upon capitalist organization and the human relations and motives associated with it. They point to its productive inefficiency, resulting from its waste of natural and human resources, and to its inability to keep production operating continuously and at full plant capacity. They hold that it tends to turn out a lot of "frillery," to use G. B. Shaw's expression, having little relation to human enjoyment. They condemn its reliance upon self interest as a guiding and motivating principle, declaring that its results do not square with the community interest, and that in addition it is immoral and degrading to those who live by it. Most of all they stress the injustice that permeates the whole system owing to its institutional arrangements. They look, therefore, for its passing and the setting up in its place of a system more in accord with their own ideals of satisfactory living. By this change they hope to bring wealth into closer causal relation with popular well-being, and to establish a condition approaching equality of opportunity for all people. They hope, furthermore, to develop a higher efficiency based upon a more whole-hearted general participation in economic activity and a conscious direction of energy toward the satisfaction of human wants. The chief means for achieving these eminently desirable ends they conceive to be the following.

A Limited Application of Private Property.—Their first step would be to limit the application of private ownership of wealth. A distinctive line should be drawn, say the socialists, between producers' wealth and consumers' wealth. As far as the latter is concerned private ownership and control are desirable. It is a type of wealth which is for use and one should have the right within the limits of his income to acquire what goods he chooses and to use them as he sees fit in the satisfaction of his wants. Any invasion of this right would take away an essential element of his freedom. Under socialism, therefore, our clothing, our homes, our automobiles, and our golf clubs would be ours to enjoy under the same guarantees of exclusive rights as we have today. But all significant producers' wealth, land as well as other capital goods, would be owned collectively. Different schools of socialists are at variance upon the question of just how the collectivity should be formed. The most numerous group at present probably think in terms of State ownership meaning by State not only the

national or federal unit or organization but also the municipal and provincial. This matter of differences need not concern us here. The point is that ownership of factories, railways, public utilities, mines, and larger merchandising establishments would be in the hands of society. The people who worked in them would be employed by the government, or other agent of society, and all returns from them after wages were paid would redound to the common benefit. The reader will raise the question why we say "*larger* merchandising establishments." The reason is that most socialists are hesitant about going the full distance in taking *all* producers' wealth out of private ownership. It is generally agreed that a garden and a wheelbarrow and perhaps a cow and a small flock of poultry—to speak of the village or country situation—should be left in private possession. Many would go farther and name also small farming, capable of being carried on without hired help, and, in the city, retail trading limited also to the same test. But the larger productive units of land and capital—those involving employment of others and a more complex basis of organization—would be taken over into the new property system. How the change might be effected is again a controversial question among different socialist groups, and constitutes one of their most difficult problems. Some call for direct confiscation of wealth allowing the present owners nothing for their loss. Others favour purchase at full or fractional value. The former of these methods is obviously unjust, while the latter does not seem to achieve the desired result as it merely substitutes one kind of wealth for another in the hands of the present capitalists. A third course would be to capture present capital wealth for society gradually through taking away the right of bequest and having all such wealth revert to the State on the death of the present owners.

Collective Management of Industry.—Along with the collective ownership the socialists would have the collective management of industry. This probably involves more need of careful consideration of how society should organize to carry on than does the matter of ownership. It is well to appreciate in this connection that the purpose of industry is to be different from what it now is: that production is to be consciously planned in relation to human wants rather than in relation to making profits for the leaders and owners. Business, as we know it, and the principles that guide business men in their handling of production and in the distribution of the income from industry, are gone. Important

questions would need to be answered about the naming of wages and prices, about how to ascertain what goods should be produced, how much of society's savings should be turned to this industry as contrasted with that, and more fundamental than these again, how much should be made accessible to the people for their enjoyment in the form of consumers' goods as contrasted with the proportion that should be carried back into industry for the maintenance and extension of plant. None of these questions can be answered arbitrarily, for democratic socialism contemplates an economic system which is consciously concerned with keeping the expenditure of productive energy related always to the fullest possible satisfaction of wants. The socialist thus takes on a big responsibility when he dismisses the present business leader and repudiates his technique.

Distribution of National Income by the Collective Authority.—

The collective ownership of producers' wealth carries with it the right to receive the returns from it. Under our system we know there are incomes from property as well as wages, fees and salaries for services performed by persons. Those who have property in producers' goods have this leverage over those who have not. We speak of landowners receiving rent and others getting interest and profits. The socialist is very emphatic concerning the advantages of socialism on this point. All such leverages are to be swept away. There are to be no longer these "unearned" types of income. All alike will be rewarded for their services in accordance with the worth of their service, or their needs, or possibly some compromise between the two. Some have contended that all should be paid the same regardless of productive capacity or of need, but this view is scarcely characteristic of modern socialist thought. The aim of socialism is not equality, but, as we have said, equality of opportunity. All persons are to stand alike as wage workers with equal access to the socially owned capital.

Equality of Opportunity.—Socialists, as already stated, stress the injustices of our system and insist upon as close an approach as possible to equality of opportunity as a first condition of their plan. Not only do they seek this through their attention to property changes but, having swept away property incomes, they would make their collective authority responsible for keeping everyone in employment. This would, in fact, be part of the responsibility of productive planning. Furthermore, they would guarantee every citizen in his fair share of medical attention.

Organization for health would be part of the general social scheme. Practitioners in this field would be on the same basis of payment as other workers. What we have said of medical service, furthermore, is substantially their position with respect to other professional services. Most important, however, in the achievement of equality of opportunity is access to education. Socialists have long stressed the significance of education, interpreting it in broader terms than we are in the habit of doing. They would make it synonymous with the whole social environment surrounding a child from its earliest years, and would place upon society the responsibility of developing his talents in the best interests of the community.

Motivation.—The socialists, moreover, look upon education as the means to help men escape from the shortcomings of the thought processes that have developed in our competitive profit-seeking society. Equality of opportunity, argues G. D. H. Cole, must be seen not as "an equal chance for all to get the better of others—a devil-take-the-hindmost-policy—which would result not in the fullest chance of self-expression for everyone, but in the crushing out of the individuality of the unsuccessful many under the heel of the successful few. Opportunity must be as far as possible the opportunity to do useful things, to perform good service, and to develop latent capacities with this definite end in view."⁴

Socialists disclaim entirely, therefore, the capitalistic assumption that the self interest, profit motive, which, as we have pointed out, is the dynamic principle of our business system, is necessary for calling forth and sustaining the best productive effort. In fact, they assert that men and women are capable of giving more effective service under the influence of social motives than capitalism is able to command from them. It is only necessary to provide the right social environment for the development of the new motives "by a reform alike of the educational system and of the organization of industry" to bring about such a transformation in men's minds that they will respond to the higher influences; then society will enter not only into the benefits of a greater efficiency but into the satisfactions that go with a sense of dignity and a finer philosophy. This is indeed a far cry from the elevation of competition and profit-making to the highest place in our economic system and relying on them to place at our disposal the most satisfactory array of goods and services.

⁴*A Guide through World Chaos* (New York, 1932), p. 495.

CHAPTER III

THE SCIENCE OF ECONOMICS

ECONOMICS has been variously defined. Frequently it is referred to as "the science of wealth," and again as "the science of prices." One modern writer has called it "the study of the allocation of scarce means to human ends," and another "the study of the social organization of economic activity." Definitions are likely to vary according to the interest and point of view of the author. They are not usually contradictory but stress particular aspects. To the authors' way of thinking the second definition above is too narrow and the first, while it covers the ground, is too indiscriminating and fails in that it lacks suggestiveness. The two others make a nice contrast through their allocation of emphasis. The reader will readily appreciate that authors projecting books as an elaboration of the one or the other would develop very different treatments.

Most important in the matter is to reach for the essentials. In the beginning is man, a creature disposed to social living, and above all, a creature with wants. Impelled by the driving force of these wants we find him casting about and exerting himself in order to satisfy them. Incidental to this he has developed across time the economic system that we have sketched in the first two chapters. In it he lives, economically speaking, and has his being. Through it he is able to live a fuller existence in terms of want satisfaction than he could without interdependence, organization, and the round-about method.

Economics, then, is a study of all these matters relating to want satisfaction. The actual satisfying of wants we call *consumption*; the process of providing the goods or wealth with which to satisfy them we speak of as *production*. In its examination of these, economics is concerned not only with their structural, visible aspects, but is interested quite as much in the driving forces and the controls that operate to make the system function and hold it in its course. Prominent among the latter are such factors as differing prices and profits. Were we to attempt a definition, therefore, more elaborate than we could offer at the outset, it might read something like this:

Economics is essentially the science of men's activities in getting and using wealth, and has for its purpose the better understanding of the various social arrangements that have been developed to further the production and use of wealth, as well as the forces and controls that operate within the economic system. It is concerned with the functioning economic order and seeks to find out about its structure, its motivation, who directs it, and what are its effects upon the quality of life.

Economics as a Science.—In our definition we have called economics a science. Science attempts to explain the phenomena that may be found in any field. It assumes cause and effect relations and seeks to establish a connection between any matter that requires explanation and other things or circumstances that may account for it. Every science has its realm of "facts" which are the working material of its operations and it seeks to discover relationships among these facts that are uniform and dependable. From these it has a basis for hypotheses and classification. The practical objective of science is prediction of the future through knowledge of relationships and beyond that lies the idea of control.¹

Dependableness of relationships in some sciences may be established through repeated experimentation. Where this is not possible, reliance will have to be placed upon persistent observation and accumulation of evidence. Granted this evidence is sufficient, the science may proceed to permanent classification and the setting forth of laws or principles calculated to explain the phenomena under consideration. Economics cannot make much use of deliberate experimentation for it is too costly or frequently it is impossible. If we are in the midst of a depression and somebody has an idea that the building industry is to blame and that if it had not operated so rapidly back in the previous prosperous period we should never have had the depression, we cannot re-enact the past and set up a different behaviour in the building industry to see if this might be true, nor can we set up a miniature model of the bigger world for experiment. Again, if somebody thinks the lethargy of the same industry is the reason for the depression continuing, it is a

¹Economics, on its purposeful side, does not hesitate to consider ideal conditions as well as actual. Thus while it studies planes of living of various social classes through actual surveys noting how much goes to each main line of expenditure (food, clothing, rent, etc.) at each level of income, it proceeds also to set up the proportions in expenditures that would exist if incomes were generally higher or less unequal.

large order to compel it to spring into activity for the purpose of testing the result when there is little demand for houses or factories.

Secondly, economics suffers as a science because one important area of facts is largely beyond observation. These latter exist psychologically and are potential of behaviour though not reflected in visible behaviour in the present. Such are attitudes and prejudices, hopes and ideals, moods and memories. In these possessions, men are largely inscrutable and among men great differences abound. Nor is the same man psychologically constant at all times.

Thirdly, the facts that are observable are frequently highly complex, overlain, and inter-influencing. Theorizing has been forced into the practice of "abstracting" certain causal factors from the rest and considering them alone with the expectation of making allowances later for other factors.

Nevertheless we can assert that economics has its field of facts and its basis for causal studies; it has its uniformities and certain possibilities of classification; it offers a stimulating field for hypotheses and has developed a few well-settled principles. For instance, it examines the relation of hours of labour per week and output in various industries, the connection between the height of duties on various commodities that are imported into a country and the amount of revenue collected, the relation between the amount of money in a country and the level of prices, and the relation between the demand for a good and its price.

Basis for Confidence in Economic Principles.—The possibility of developing a science in any field depends essentially upon whether or not dependable uniformities can be discovered among the chosen facts. It can be asserted that, so far as it concerns economic matters at least, human conduct, while in the particular it seems variable enough, when considered with relation to large numbers is fairly dependable. We cannot tell in advance, for instance, whether a certain housewife will buy pork or beef or chicken today for dinner but we can predicate a fair degree of constancy in the proportions of these three kinds of meat that will be consumed from day to day by a city with a population of 75,000. Dependability in economics is due to a number of circumstances. In the first place, man's physiological nature lays certain restraints upon the arbitrariness of his conduct. He may choose freely between different kinds of meats but his natural appetite calls for a somewhat definite proportioning between meats and vegetables, between cereals and fruits. Again, his hunger rises, is appeased, and recurs according to a well-charted

pattern necessitating regularity of contacts with the market. In the matter of doing his day's work he finds that successive hours of work are accomplished at an increasing sacrifice to himself as the day wears on toward night, a circumstance that has its bearing on the length of the working day that he desires. All people, furthermore, are very much alike in these matters and consequently tend to show a large degree of uniformity in their behaviour.

In the second place, man's behaviour is closely related to physical nature and consequently it tends to parallel the uniformities of the latter. He is dependent, for example, upon the seasons which have a regular way of coming and going. He buys his winter suits and his summer suits in response to the dictates of climate; he buys his coal in the fall and his ice in the summer; and, furthermore, he puts forth his productive efforts also in relation to the requirements of the seasonal demands. Some variation there is in what patterns of clothing an establishment will put out and in what type of seeds a farmer will sow, but limits of variation are set by the fact that all clothiers alike must produce light clothing in the spring and all farmers will be turning their energies to putting in their seeds at that time of year. Then again, we are reminded that man, in satisfying his wants, turns to nature for his basic goods. Inasmuch as economics studies the production of these goods as well as their use, we may expect to find a basis for principles in production economics in the uniformities of nature itself. And such, in fact, is the case.

In the third place, behaviour shows its uniformities because people have mental patterns from which they vary little from day to day or from one year to another, and which are very much alike for all normal persons. They are governed, for instance, by styles which prescribe limits to the variations in their clothing and their houses and their automobiles. Most important in this connection, however, is the fact that all people can be depended upon to resort to calculation in measuring the worth of one commodity against another, and also in measuring the expenditure of their own labour energies against money rewards. They tend to buy more of a commodity when its price is down; they tend to offer more labour service in the labour market when wages are high. To the degree that each person stands steadfastly by the calculation pattern of action and to the extent that all people's calculations start from similar premises, we should expect to find uniformities in economic behaviour.

The regularities of man's physical conditioning, the uniformities that exist in nature, and, above all, the tendency in a world charac-

terized by a price system to practise calculation and to think alike in economic matters, these taken together afford the basis for a fair degree of uniformity and dependableness in economic activity and provide the basis for confidence in economic principles.

While we thus pronounce the central core of economics to be a science, it is well to remark that much economic study and observation are not associated with any particular principles. Large sections of economic literature are devoted mainly to a descriptive account of the functioning of economic organization, to the changes in institutions, to the development of problems, and to the record of the social attack upon the latter in various periods and places.

Objectivity.—If we would be successful students of economics we must give ourselves over as far as possible to an objective approach. This is an easy resolution to make but it is not so easy to practise, for people do not approach these fields of the social sciences with open minds. Many of the problems are highly controversial, and individuals brought up in the atmosphere of controversy are prejudiced early toward one way of thinking or another with respect to each problem. Let the student consult his own mind with respect to the merits of "big business." He will probably find himself *for* or *against* it without any definite knowledge of the facts. He just "feels" the way he does. Again, let him examine his attitude toward the tariff, or trade unions, or government paper money, or socialism, or "Russia." The chances are he knows little enough of what socialism is or what Russia does, but he has his very decided opinions about them, much more decided probably than he will have after he has studied them for years. Opinions like these, or prejudices, or "slants," are stumbling-blocks in the way of the student making progress in economic study. They are emotional attitudes, prejudices untested by fact. They predispose the student toward receiving gladly certain classes of data that may seem to support his point of view while, at the same time, he refuses to accept other data of equal merit because they undermine his position. Instead of standing open-minded, therefore, before all the facts and arriving at the conclusions that scientific practice calls for, he merely gathers data to build a case in support of his preconceptions. Many people, moreover, are not qualified to be scientists. Temperamentally they are impatient; they run to the emotional and are more at home in controversy where positions can be taken and defended; they need to reach decisions and are not happy with the open mind.

The *psychological* approach is valuable for suggesting in some detail in what manner we are succeeding and in what manner we are failing to achieve satisfaction through our economic methods and arrangements. It holds before us a chart or standard of welfare indicating from the nature of man himself, considered as an end, what the normal intention of all economic effort should be. Emphasis on knowledge of human nature turns attention to the particular parts or phases of these methods and arrangements that are failing to provide that satisfaction and suggests the directions of healthful change. The human factor being more ultimate and less susceptible to control leads us to devote the larger part of this book to a study of economic arrangements, or as we usually phrase it, the economic organization and its functioning. Change itself we can study only through an appeal to history.

The Point of View.—The point of view of economics is that of attaining satisfactory living for the whole group. It does not concern itself primarily with forging tools to enable the individual to enrich himself. That is rather the outlook of business and training for business. But looking at the matter analytically, what are the criteria of satisfactory economic living? Shall we answer in terms of national production figures? Can we measure satisfaction from such items as we sometimes see depicted in eulogistic portraits of ourselves, such as that Canada has vast natural resources; that she exports more wheat and nickel and pulp than any other nation; that, though small in population, she ranks third in world trade, etc.?

There are many among our people who find great satisfaction in facts like these. And, indeed, there is reason for congratulation in having forged to the front in productive achievement. Many have come to realize, however, that colossal production—while it makes possible many things—is not unaccompanied by conditions of great misery and bad conditions of life rather generally existing. For the emphasis over considerable periods may be on the production of commodities that have little relation to the happiness of the people, or the distribution of the ownership of the goods produced may be so poorly done that large sections of the population can make little use of them.

May we then measure our condition in terms of per capita income? When we read that Canada has, with one exception, the largest income per person of any country in the world, is this not a fair index of how we stand?

But, again, we must answer that, although this augurs well, it

still tells us nothing about the distribution of that income among the people, nor does it disclose anything with regard to the economic security or insecurity in which the lower half live. Some countries, for instance, that have smaller incomes on the average, guarantee their working population against poverty through sickness, unemployment, or old age through various kinds of social insurance.

A better indication of satisfactory living would seem to be found in conditions of consumption. Are our people, by and large, better fed, better housed, better clothed, more amply equipped with medical, educational, and amusement services than people have been before? If so, we have reason to congratulate ourselves upon the progressive nature of our civilization and to look with pride upon our economic order.

But even this is not all. If, at the same time that we boast of these, we find, in visiting our mines and our factories, that there is a lack of self-determination in the labourer's working life; that he labours under nerve-exhausting conditions that detract from his ability to enjoy the profusion of benefits with which our civilization favours him; that his life on the job is isolated, demanding, and, in some sense, unworthy of his intellect, then we must admit that sufficiency in the possession of goods is not everything. For there are two aspects of economic living as it affects the average citizen. He plays his part in the economic order as producer and as consumer. He lives on the job as well as off it. And, if his task is a driven task, and the work he does is no expression of his personality, then it can scarcely be said we have achieved the condition of the satisfactory life.

The point of view of economics, in short, is that of the citizen, the statesman, and the humanitarian. Very often, in the pages that follow, the community whose interests are considered will of necessity be definitely bounded. Sometimes it will be the population comprised within the national state. Should duties be high or low? The economist answers by asking which of the two brings the greater good to the whole Canadian people. Should natural power be allowed to pass into private hands? Again the criterion is that of the whole society. With the emphasis upon the latter and its welfare the older name for the science was Political Economy rather than Economics and Adam Smith called the first book on the subject, *The Wealth of Nations*. It is true, direct reference is often had to some other group. For instance, when it is discussed whether we should shop in the home town or send to the distant mail order

house, the case may well be considered from the angle of the home town. Sometimes again, we may be viewing standards of living and unemployment on bases narrower than that of the whole society. Ultimately, however, the point of view is the inclusive one. It is the utilization of scarce resources to human needs.

Terminology: Utility.—In order to satisfy his wants man looks outward to the world about him. There he discovers that in the use of certain objects and in the ministrations of the people with whom he lives, his wants may be answered. If he is thirsty he quenches his thirst with water or with wine. If he is ill he goes to the doctor for advice. The want-satisfying capacity of an object the economist speaks of as its utility. The ministrations of people he calls services. Sometimes he uses the concept utility in the plural and refers to an object as yielding utilities. Not all objects that man encounters have this capacity for yielding him utilities. The sow thistle that the farmer sees in his fields is not considered as an object contributing to his wants nor is any satisfaction derived by anyone from the rocks that protrude from the steep mountain side. Supposing, however, that some student in practical botany discovers some nutritive or medicinal quality in the thistle or that gold is discovered in the mountain rock. The situation is soon changed. The weed and the rock immediately become objects of utility. This suggests that the utility of an object does not consist of some quality inherent in the object. It is rather in the nature of a relationship existing between man, on the one hand, and the object or its properties on the other. It is subjective rather than objective. It depends, first, upon the experiencing of a want and, secondly, discovering that the object has that about it which is capable of satisfying the want. It is, in fact, a fitting thing that comes and goes, that waxes and wanes following the desire of the individual. The utility of an object may change because of a change in the inherent qualities of the object as when a banana passes from green to ripe and then into a condition of decay. Or it may change with no variation in objective qualities as where a hat passes from a condition of being the vogue to being a hat out of style. An object has utility when a relation exists between it and some human want. Its utility disappears with the breaking down of that relation.²

²The reader is to be warned against reading into the term utility any ethical meaning. As used by the economist it has no such significance. The word "useful," or "usefulness," may carry such meaning, but not so utility.

Opposed to utility and service are the expressions disutility and disservice. They suggest experience of objects or conditions that are hard or distasteful rather than enjoyable. Labour is the great disutility—the chief cost that must be undergone to achieve utility. There are other expressions of it, however, such as the uncertainties and risks that accompany economic endeavour, the delay that we often experience in reaching our enjoyments, and having to live in noisy and smoky surroundings as we work. Evidently, there are two orders of disutility, the one constituting the cost of achieving utilities, the other representing subtractions from enjoyment.

Goods and Wealth.—All objects that have utility are called goods. Some goods are found in such abundance that man experiences no difficulty in obtaining all that he wants to satisfy his desires. For this reason they are called free goods. Such are air, sunshine, and water in the open country. They present no economic problems and are, therefore, mostly beyond the range of our consideration. Other goods are not found in such profusion that man can have all he wants of them without some degree of difficulty. These are economic goods or *wealth*. It is with them that economics is concerned. Wealth is any good which possesses utility, is scarce in some degree, and which, in addition, may be appropriated by man or transferred from one person to another. Thus scarce minerals of great utility might exist in the Antarctic Continent but not being appropriable they would not class as wealth. Similarly a great singer's voice is not wealth though a record made from it is. Wealth considered in this social, transferable sense is, in fact, what one would find included in a national census under that category. So considered wealth does not include claims of one person upon another or claims between firms or upon governments. Promissory notes, accounts receivable of merchants, bonds, and paper money, are ruled out. Social wealth exists in the essential goods of the country. These others although considered as wealth by the individual are really property claims that divide the equity in the goods. Viewed in another way they are all debits and credits which, in a survey of the whole, cancel each other. This, of course, is to cast no doubt upon their importance. It does suggest, however, that the limitation upon a whole people through scarcity of goods is a different matter from a limitation through distribution of claims.

Income.—Wealth we have presented as a social concept and utilities as an individual matter, the utility of any good being the

relationship between it and some person or persons. Nevertheless, remembering that society consists of individuals, it is possible to think of wealth as a *stock* or a *store* or an embodiment of *utilities*. With durable goods like houses, the period of storage is extensive, while for non-durable goods it is less so; *income* in contrast with this suggests a *flow of utilities* over a period of time. A man's income we speak of as \$4,000 a year but in doing so we are only saying that he is being presented with claims upon that value of wealth and services. The real income of an individual consists of all the utilities and services he enjoys during the period plus or minus any additions to, or subtractions from, the stock of wealth he commanded at the beginning.³ The same definition, moreover, describes the income of a whole society. The income of a people may be found by collecting figures of the total net production, including services as well as goods, or it may be approached by way of all payments to individuals in the form of wages, salaries, interest, profits to merchants and farmers, and the like.

Wealth vs. Services.—Utilities derived from wealth and services are direct means to the satisfaction of wants. Utilities from wealth

³Some economists, however, use the term in a more restricted sense. They hold that real income should be confined to services and utilities actually enjoyed, or existing at least in goods capable of being immediately enjoyed such as food, clothing, shelter, etc. They would rule out additions to capital wealth and durable goods whose utilities will be yielded in future periods. Actual utilities rather than potential utilities make up the content of income. Similarly the income of a society would not include increases to capital, or durable goods like houses (except for this period's use as measured by the rentals). The potential utilities that associate with these forms of wealth, such writers hold, are incomplete or operate only indirectly. They must be discounted, furthermore, if we would know their present worth. Income thus defined corresponds closely with consumption and is measured by expenditures for consumption goods. For fuller statement, see article on "Income" by Irving Fisher, in *Encyclopædia of the Social Sciences*, ed. by E. R. A. Seligman (New York, 1930 *et seq.*). Consult also Wm. H. Lough, *High-Level Consumption* (New York, 1935), and Frank H. Knight, "The Ricardian Theory of Production and Distribution" (*Canadian Journal of Economics and Political Science*, vol. I, Feb., 1935). While such a definition is useful for some purposes, it is out of line with practice in actual surveys of income. There is much to be said furthermore for keeping income associated with the total production advance of a society rather than with what it is using up, i.e. for stressing the flow in the whole wealth process rather than the flow at the point of final consumption. While noting the second usage therefore, we prefer to treat income as the flow of all utilities, complete and incomplete, received on balance by an individual or by all the individuals in a society.

are conceived of as stored up in goods, embodied in material forms, and may be drawn upon as desired or in accordance with the nature of the good. Utilities from services have no such material embodiment but flow immediately from the performance of the services. The definition "Economics is the *science of wealth*," it may be noted, is incomplete since it fails to take account of service utilities.

Producers' (or Capital) Goods vs. Consumers' Goods.—Producers' or capital goods consist of all forms of wealth used in the process of production. They include not only natural resources,⁴ but also buildings, machines, equipment, and raw materials in various stages of fabrication. In brief, producers' goods are wealth used to produce other goods and services. Consumers' goods, on the other hand, are forms of wealth in the hands of the ultimate consumer. That is, they are in possession of the person who derives utility or satisfaction directly from their use. A loaf of bread on the citizen's breakfast table is a consumer's good. But in the showcase of the baker it would be a producer's good.

Finance Capital.—Monetary control over goods and services is known as finance capital. In modern industrial society, it is necessary to mobilize materials and secure various types of services on a large scale. Without the existence of finance capital this could not be accomplished, at least, not as effectively as it is today. The possessor of purchasing power (finance capital) can muster the agents of production and order them for his purpose. Similarly, a consumer having finance capital can command goods and services for direct enjoyment. Finance capital originates in savings of the community and in the extension of bank credit.

⁴Many economists prefer to regard natural resources as a separate productive factor designated by the term "land."

CHAPTER IV

THE NATIONAL INCOME

THE national income is essentially a simple concept. In general it refers to the sum of all incomes accruing to the people of a particular country within a given period of time, usually a year. A distinction already has been made between the monetary and real income of individuals. The same difference must be observed in considering the national income. Let us first deal with the monetary aspects.

NATIONAL MONETARY INCOME AND PROBLEMS OF MEASUREMENT

The sum of all individual monetary incomes within a country is the simplest conception of the national income. But a mere listing by the census taker of the amount of money received by each person during a year would give an erroneous impression of the nation's economic welfare. Such procedure would result in an estimate of the *gross* national income. What we really want is the net figure. The distinction between *gross* and *net* estimates leads to a consideration of the difficulties involved in measuring the national monetary income.

Measuring the National Income.—The chief problem in this connection is the avoidance of *double counting*. If a physician's income from professional fees amounts to \$15,000 per year and he pays his nurse-secretary \$3,000, is the figure entering the net national income for the doctor and nurse \$15,000 or \$18,000? (i.e., \$15,000 plus \$3,000). Clearly it is the former, otherwise there would be double counting. The latter sum (\$18,000) is a gross figure. If the doctor's wife acted as secretary and professional assistant without compensation, the income for national accounting purposes would remain \$15,000. This would be true also with reference to any pecuniary allowances which the doctor might make to members of his family. Giving his son \$200 a year spending money would increase the gross monetary income of the community by that amount. But the net income would remain unchanged at \$15,000.

The policy of a government in collecting taxes and making payments out of the proceeds to individuals and groups complicates the picture. This is the problem of so-called *transfer payments*. If the government collects \$2,000 in taxes from the physician and pays it out in the form of family allowances, pensions to aged people and veterans, etc., the sum thus collected and spent by the government cannot be added to the doctor's receipts (\$15,000) in arriving at the figure contributing to the net national income. Most of the interest paid on our public debt is in the nature of a transfer payment. Interest applying to "dead-weight" government debt (loans previously incurred for war and other purposes which are unrelated to current production) is in this category. Hence it is not included in national income. In brief, both as regards public and private transactions, payments to persons which result from the equivalent lowering of incomes of other members of the community are not regarded as part of the net national income.

But there are other complications. These have to do primarily with durable goods. The landlord who rents a house gets a net money income (rent minus expenses) from this parcel of wealth. On the other hand, the owner of a similar house who lives in it receives no such monetary reward. Is it logical to count the landlord's net receipts as part of the national income and make no allowance for the rental value of the home owner's house?¹ If no such allowance is made, then a shift to a greater proportion of home ownership would decrease the national income. Increased tenancy, of course, would have the opposite effect. Yet it does not necessarily follow that in the first case the nation would become poorer and in the second wealthier. Furthermore, if we attempt to make an adjustment with reference to home ownership, what about other durable goods, e.g. automobiles? It is difficult to decide where to "draw the line." This is a problem with which statisticians must grapple. We must not be surprised if they fail to reach complete agreement on the subject. But the general consensus of opinion seems to be that only these items which are measured in money or are easily represented in monetary terms should be included. Therefore, no attempt is made to estimate income from such goods as household furniture and the clothes we

¹In Canada "implicit" rent (i.e., estimated rent of owner-occupied house) is included in national income.

wear.² The question of allowances for "implicit" income from durable goods leads directly to the all important concept of *real* income.

The National Real Income.—The national real income may be defined as the net flow of goods and services to the community during a given period. It is much more significant than the monetary income. Owing to alterations in the purchasing power of money, fluctuations in the size of the national monetary income do not necessarily reflect corresponding changes in the real income. While this is so, it is nevertheless true that the real income is measured by the money yardstick. For practical reasons it is obviously impossible to make a list of all the articles produced and services rendered during a year in a modern country. Hence the approach to the problem, the only feasible one, is in terms of the money value of such goods and services. This will be demonstrated in subsequent discussion. But first we must observe some of the pitfalls to be avoided in arriving at a satisfactory concept of national real income.

Here, as in the case of monetary income, what we are seeking is not the *gross* but the *net* real income. And again it is necessary to avoid double counting. For example, in calculating the contribution made by a farmer to the real income of society, the value of the beef cattle produced would be included, *but not that of the feed consumed by the herd*. This is true whether the feed was produced on the farm or purchased from a supply house. Here it is assumed that the farmer has the cattle ready for market but has not disposed of them at the end of the production period. If the cattle were bought and processed by a meat packing establishment, then the beef and by-products contribute to the national income, not the cattle as sold by the farmer. Similarly in the production of cotton cloth, the value of raw cotton would not be added to that of the finished product (cotton cloth). In other words, in order to avoid double counting, the value of raw materials entering into the production of a given commodity is excluded. The value of the *final product* only is taken into consideration in arriving at a figure for the net national real income.

The term *final product* merits further consideration. It applies not only to goods available for immediate and direct consumption, but also to new capital goods, such as buildings and machines.

²In Canada certain forms of income received "in kind," e.g., "food grown and consumed on farms," are included in national income.

Furthermore, it includes all net additions to inventories within the productive period. If our cotton manufacturer found that in addition to the \$50,000 worth of finished cloth produced during the year, he had \$5,000 worth of raw cotton in excess of that on hand at the beginning of the period, this surplus would be regarded as a final product (hence an addition to national income) *provided the stocks of other dealers in raw cotton were at least as large as they were at the beginning of the period.*³ If A simply bought extra raw material and thereby reduced B's stock by an equivalent amount, there would be no net addition to real income. In general it may be said that net increases in inventories whatever their form, constitute an addition to the national real income.

But the transforming of raw materials into finished products is not the only way in which goods are used up in the production of other goods. The machinery in the cotton factory wears out in the process of making cotton cloth. Hence it is necessary to make allowance for depreciation of capital equipment in calculating the net national real income. From the value of the final product (cotton cloth) allowance for depreciation of buildings, machinery, and other forms of capital goods must be deducted. Another way of expressing the same concept, so far as the production process is concerned, is to say that capital equipment (including raw materials) must be kept intact before we can consider final products as net additions to real income. Generally speaking this rule applies to obsolescence (becoming out of date) as well as to depreciation, although there is some difference of opinion on this point.

The question may be raised, if raw materials must not be included along with final products in estimating the net national income, what about the food consumed by the human working force? Should it not be excluded on the same grounds? The answer is "no." There are two reasons for this position. In the first place, consumption of food will go on whether people work or not. It can not be successfully argued that idle members of the working population consume food merely to keep themselves in readiness for employment. In the second place, food is a consumers' good and thus in a very real sense, constitutes a "*final product*." If it were excluded, the national income would be surprisingly small.

³If the stocks of other dealers decreased by a like amount, there would be no net addition to the national income so far as this commodity was concerned.

RELATION BETWEEN MONETARY AND REAL NATIONAL INCOME

Although monetary and real national income obviously are not identical, there is a close relation between them. What is the *nature* of this *relationship*? What is the significant link between the stream of money receipts and the flow of commodities and services over a given period? The connection is to be found in the process of producing and consuming economic goods. Society as a whole is made up of producers and consumers. The producers of one commodity are consumers of other commodities. The proceeds of sales (incomes) received by one group are used to purchase goods (expenditures) offered on the market by other groups. But such expenditures are incomes to these other groups. Thus the value of all final goods sold has a two-fold significance. In the first place, it measures the real income in monetary terms and, in the second place, it represents the money income of the nation.

In order to explain how the value of final products represents the money income of the community, it is necessary to trace further the relation between such value, costs and incomes. The seller of a final product receives a sum of money which is not clear gain to him. He incurred certain expenses of production. Since, by and large, these costs are less than the selling price, he receives a net income (value of final product = costs plus net income). These costs are income to other producers who, in turn, have costs and (if economically successful) net incomes. As a result the value of the final product can be regarded, first, as the costs plus net income of the seller concerned with the last stage of production (selling good to ultimate user), or secondly, the sum of net incomes all along the line. That is, the total of net gains incident to all stages of production. In other words, the value of what is produced (final product) is equal to net money incomes taken as a whole. This analysis applies to a closed economy, i.e., a country having no economic relations with the outside world. Modification of this situation will be considered in the chapter on international trade.

Now it has been shown that total money income is the payment for, hence represents the value of, the national real income. From what has been said about costs, net incomes, and value, one can observe that it is possible to approach the problem of national

income calculation from either the "cost" or the "expenditure" side of the picture. The Dominion Bureau of Statistics uses both methods in estimating the national income of Canada.

THE NATIONAL INCOME OF CANADA

Gross National Product at Market Prices.—The National Income of Canada for the years 1938-47 is set forth in Tables I, II, III, and IV.

Gross National Product at Market Prices, Table I, "is defined as the value of all final goods and services produced in a given year measured by analysis of the costs involved in production."⁴ Thus we see that it approaches the measurement problem from the viewpoint of *costs*. It is an accounting of the expenses incurred in producing the current year's output of goods and services for the entire country. Double counting is avoided to the extent that costs involved in the purchase of goods and services by one concern from another are excluded. On the other hand, the final figure is a *gross* estimate in that depreciation of capital equipment is included in the national product.

The most significant part of gross national product is the Net National Income at Factor Cost (Table I, Item 5). This is the income earned by persons from current productive pursuits "whether their services are rendered to business firms, to the government, or directly to the consuming public."⁵ Let us examine briefly its constituent elements as presented in Table I. The first item, Salaries, Wages and Supplementary Labour Income includes (1) all salaries and wages received by employees before deduction of personal income tax and employee contributions to social security plans, and (2) employer contributions to unemployment insurance and other social security schemes. The second item, Military Pay and Allowances, is made up of (1) cash payments to members of the armed services and their dependents, and (2) estimated value of food and clothing issues. Item 3, Investment Income, includes returns on invested capital in the form of interest, rent, and profits, before taxes are paid. It includes interest on that part of the public debt which was incurred to further current production. Interest on this portion of the govern-

⁴Dominion Bureau of Statistics, *National Accounts, Income and Expenditure* (Ottawa, 1946), p. 11.

⁵*Ibid.*, p. 11.

TABLE I
NET NATIONAL INCOME OF CANADA AT FACTOR COST AND GROSS NATIONAL PRODUCT AT MARKET PRICES, 1938-47*
(In millions of dollars)

Item No.	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947†
1	2,476	2,565	2,922	3,555	4,219	4,703	4,869	4,859	5,195	6,125
2	9	32	193	386	641	910	1,068	1,132	340	83
3	687	776	1,120	1,480	1,717	1,723	1,755	1,911	1,903	2,060
4	800	901	1,001	1,123	1,686	1,605	1,904	1,742	2,179	2,467
5										
	3,972	4,274	5,236	6,544	8,273	8,941	9,596	9,644	9,617	10,735
6	630	726	826	1,048	1,073	1,126	1,123	1,000	1,239	1,538
7	560	582	655	755	900	929	881	792	815	835
8	- 21	- 1	+ 23	+ 56	+ 241	+ 248	+ 220	+ 178	- 15	- 56
9										
	5,141	5,581	6,740	8,403	10,487	11,244	11,820	11,614	11,656	13,052

*Source: Dominion Bureau of Statistics, *National Accounts, Income and Expenditure* (Ottawa, 1947 and 1948).

†Preliminary estimate.

Item 7 includes an estimate of "capital outlay charged to current account," which has also been included with

Item 3 (a), *Gross Home Investment* in Table II.

ment debt is *not* a transfer payment. Item 4, Net Income of Agriculture and Other Unincorporated Business, constitutes a mixture of salaries, wages, and investment income which can not be separated, except on a purely arbitrary basis. Generally speaking, it covers the receipts of working proprietors from their own businesses. Agriculture is, of course, the most important individual enterprise under this heading.

In general it may be said that Net National Income at Factor Cost is the aggregate of earnings paid or accruing in a given year to persons and public agencies (i.e., government) in Canada as a return for their participation in the process of production. According to this definition, it excludes capital gains or losses, i.e., alterations in the value of capital goods resulting from the influence of factors not directly related to the production process, chiefly changes in the general price level.

Referring again to Table I, it will be noted that two significant items, Indirect Taxes Less Subsidies, and Depreciation Allowances and Similar Business Costs are added to net income at factor cost in order to arrive at an estimate of Gross National Product.⁶ Indirect taxes are included because they are costs which must be changed against the prices of final products. These taxes are included in the ultimate market price, but are not earned by anyone because of his role in production. As subsidies are the opposite of taxes, they must be deducted. Depreciation allowances do not accrue to any factor of production, but they are an essential part of production costs making up the final market price of commodities. Hence they are excluded from net national income but are included in gross national product.

Gross National Expenditure at Market Price.—An estimate of the national income from the viewpoint of expenditures is given in Table II. Gross National Expenditure is "the value of all final goods and services measured by analysis of sales of all these goods and services to all sections of the community."⁷ Since gross national product was the sum of all costs, including indirect taxes and depreciation allowances, entering into the *selling value* of all final goods, the *totals* in Tables I and II are identical. Gross

⁶The *residual error* is an accounting item inserted to effect a balance between Gross National Product and Gross National Expenditure. It is small and may be disregarded in this treatment.

⁷Dominion Bureau of Statistics, *National Accounts, Income and Expenditure* (Ottawa, 1946), p. 11.

TABLE II

CANADIAN GROSS NATIONAL EXPENDITURE AT MARKET PRICES, 1938-47*
(In millions of dollars)

Item No.		1938	1939	1940	1941	1942	1943	1944	1945	1946	1947†
1	Personal expenditure on consumer goods and services.....	3,714	3,817	4,334	4,979	5,508	5,822	6,235	6,782	7,682	8,711
2	Government expenditure— (a) War—goods and services, excluding Mutual Aid, etc.— Mutual Aid, UNRRA, and Military Relief.....	36	70	549	1,129	2,222	3,096	3,410	1,876	1,736‡	1,462‡
3	(b) Non-War.....	685	690	683	647	1,002	518	960	1,041	107	38
	Gross home investment— (a) Plant, equipment, and housing§	576	554	713	995	931	828	756	865	1,321	2,042
	(b) Inventories§§.....	7	329	368	218	333	— 42	— 83	— 294	475	780
4	Exports of goods and services**	1,350	1,449	1,792	2,458	2,347	3,443	3,566	3,576	3,170	3,538
5	Imports of goods and services††...	— 1,257	— 1,328	— 1,626	— 1,967	— 2,275	— 2,858	— 3,539	— 2,895	— 2,850	— 3,576
6	Residual error of estimate for reconciliation with Table I, Item 9.....	+ 21	..	— 23	— 56	— 242	— 248	— 220	— 178	+ 15	+ 57
7	GROSS NATIONAL EXPENDITURE AT MARKET PRICES (1) + (2) + (3) + (4) + (5) + (6).....	5,141	5,581	6,740	8,403	10,487	11,244	11,820	11,614	11,656	13,052

*Source: Dominion Bureau of Statistics, *National Accounts, Income and Expenditure*.

†Preliminary estimate.

‡Includes non-war expenditures.

§Item 3 (a)—See Footnote‡, Table I.

§§Item 3 (b)—Includes grain held by the Canadian Wheat Board.

**Item 4—Excludes Mutual Aid, UNRRA, and Military Relief.

††Items 4 and 5—Minor adjustments have been made to the figures of current receipts and payments shown on page 23 of *The Canadian Balance of International Payments, 1926-1946*, Dominion Bureau of Statistics, to achieve consistency with the other component series.

national expenditure is actually a list of final sales for the country as a whole. Here again, double counting is avoided by excluding sales of raw materials and goods in process between businesses. On the other hand, national expenditure is *gross* because no allowance is made for replacement of capital equipment used up in the current production period.

The expenditures portrayed in Table II were made by individuals, governments, and privately-owned institutions. The first two items in the table are practically self-explanatory. Personal Expenditure on Consumer Goods and Services refers to payments by Canadian residents for direct consumer purchases. This includes expenditures of Canadians living abroad temporarily (e.g., tourists and members of the Armed Services) and excludes expenditures of foreigners temporarily residing in Canada. Although this item for the period 1938-45 rose from \$3,714 million to \$6,782 million, consumer purchases as a proportion of gross national expenditure fell from approximately 72 per cent in 1938 to about 58 per cent in 1945. During 1946 and 1947 it was approximately 66 per cent, indicating increased consumer buying with the return of peace-time conditions.

Government Expenditure reflects clearly the role of government spending in its relation to the national income. In 1938, the last pre-war year, government outlays constituted a little over 14 per cent of gross national expenditure. By 1944 they had increased to over 43 per cent of the national income as thus measured. During this period total gross national expenditure rose from \$5,141 million to \$11,820 million, while government spending increased from \$721 million to \$5,105 million. It will be observed that government outlays in 1944 were almost as large as the entire national income in 1938. During the period 1938-44, gross national expenditures increased by \$6,679 million and government spending by \$4,384 million. Thus we see that augmented government expenditures were reflected in a rise in national income.

Gross Home Investment (Item 3) shows expenditures on capital goods by private enterprise in Canada. It will be observed that gross investment includes not only new plant, equipment and housing but also additions to (and deductions from) inventories. Exports of Goods and Services (Item 4) are products of Canadian industry (part of gross national product) hence the selling value must be included in the table. Conversely, Imports of Goods and Services (Item 5) do not result directly from productive effort in

TABLE III
CANADIAN PERSONAL INCOME*
(In millions of dollars)

Item No.	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947†
1	Salaries, wages and supplementary labour income.....	2,476	2,565	2,922	3,555	4,219	4,869	4,859	5,195	6,125
2	Deduct: Employer and employee contributions to social insurance and government pension funds.....	- 33	- 35	- 38	- 68	- 111	- 134	- 136	- 145	- 165
3	Military pay and allowances.....	9	32	193	386	641	1,068	1,132	340	83
4	Net income of agriculture and other unincorporated business.....	800	901	1,001	1,123	1,696	1,904	1,742	2,179	2,467
5	Interest, dividends, and net rental income of persons.....	511	553	594	618	683	765	805	845	911
	Transfer payments to persons—									
	(a) From government.....	263	250	225	198	227	264	553	1,109	824
	(b) Charitable contributions of corporations.....	5	6	7	10	12	11	12	13	14
6	PERSONAL INCOME (1) + (2) + (3) + (4) + (5).....	4,031	4,272	4,904	5,822	7,367	8,747	8,967	9,536	10,259

*Source: Dominion Bureau of Statistics, *National Accounts, Income and Expenditure*.

†Preliminary estimate.

‡Item 5 (a)—Excludes government interest on debt not incurred to finance existing real assets, since this is included under Item 4 above.

Canada and are excluded from gross national expenditure. To regard expenditures on *both* exports and imports as part of national income would be double counting. The difference between Items 4 and 5 indicates net private investment abroad by Canadians. When the value of exports exceeds that of imports, net private investment abroad is positive; that is, Canadians are investing on balance in other countries. If the value of exports is less than that of imports, net private investment outside the country is negative, or disinvestment is taking place.

PERSONAL INCOME

Still another method of presenting national income data is indicated in Table III. The concept of personal income as here illustrated is directly related to the other views of national income we have discussed. It is derived by making certain adjustments with reference to net national income at factor cost. Employer and Employee Contributions to Social Insurance and Government Pension Funds (Item 1) are deducted since they were not actually received by persons currently engaged in production. Item 4, Interest, Dividends and Net Rental Income of Persons, is less than Investment Income (Table I, Item 3). This is so because not all earnings from investments were paid to individuals; for example, "undistributed profits of corporations, corporate income taxes and government trading profits."⁸

On the other hand personal income is augmented by Transfer Payments to Persons. These transfer payments "are elements of *personal income which are not rewards for productive services.*"⁹ In other words, they were not received in payment for participation in production. The principal elements in transfer payments are interest on government bonds which represent "deadweight," public debt, and social security outlays.¹⁰

When the above mentioned adjustments have been effected the resulting total *personal income* constitutes the sum of purchasing power in the hands of the public out of which consumer expenditures are made, savings are accumulated and taxes on personal incomes are paid. The amounts allotted to each of these three purposes, i.e., payments for consumer goods, savings and taxes, for the period 1938-47 is shown in Table IV.

⁸*Ibid.*, p. 18.

⁹*Ibid.*

¹⁰But see Table III, footnote †.

TABLE IV
CANADIAN DISPOSITION OF PERSONAL INCOME*
(In millions of dollars)

Item No.	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947†
1										
Personal direct taxes‡										
(a) Income taxes.....	62	61	91	239	433	631	771	733	711	694
(b) Succession duties.....	32	28	23	30	37	38	40	47	52	55
(c) Miscellaneous.....	31	32	34	28	24	28	25	25	31	31
Total direct taxes.....	125	121	148	297	494	697	836	805	794	780
2 Personal expenditure on consumer goods and services.....	8,714	3,817	4,334	4,979	5,508	5,822	6,235	6,782	7,682	8,711
3 Personal savings§.....	192	334	422	546	1,365	1,520	1,676	1,380	1,060	768
4 PERSONAL INCOME										
(1) + (2) + (3).....	4,081	4,272	4,904	5,822	7,367	8,039	8,747	8,967	9,536	10,259

*Source: Dominion Bureau of Statistics, *National Accounts, Income and Expenditure*.

†Preliminary estimate.

‡Item 1—The tax figures are actual collections in the current year reduced in the case of income taxes by the estimated refundable portion which has been treated as savings. Miscellaneous direct taxes include the personal share of motor vehicle and other licences, permits, and fees.

§Item 3—Personal saving is estimated residually by deducting personal direct taxes and personal expenditure on goods and services from total personal income in Table III. It includes changes in farm inventories, and the estimated refundable portion of personal income taxes as follows:

	1938	1939	1940	1941	1942	1943	1944	1945	1946	Preliminary 1946
Net changes in farm inventories	36	60	80	-58	368	-62	-124	-238	47	
Refundable personal taxes.....	..	..	..	..	59	138	76	4	..	

Recent Changes in National Income Data.¹¹—An examination of Tables I, II, III, and IV reveals some interesting facts regarding recent changes in the Canadian economy. According to the published estimates for 1946, net national income at factor cost (Table I) has fallen from the peak of \$9,644 millions in 1945 to \$9,617 millions in 1946. This decline of \$27 millions was more than counterbalanced by a rise in transfer payments (Table III) from \$565 millions in 1945 to \$1,122 millions in 1946, an increase of \$557 millions. The augmenting of transfer payments, however, was sufficient not only to maintain the gross national expenditure (Table II) at the 1945 level of \$11,614 million, but also to cause a slight increase. It rose to \$11,656 million in 1946, an increase of \$42 million. For the same years, personal income (Table III) rose from \$8,967 million to \$9,536 million, an increase of \$569 million. In fact personal income in 1946 was practically the same as net national income at factor cost, the latter being \$9,617 million. It will be seen also that personal expenditure on consumer goods and services (Table II) during 1946 was greater than in any previous year and \$900 million above that of 1945. This rise in spending power of the Canadian people tends to cause an upward pressure on prices. Recent preliminary national income data indicate that, in general, the changes registered in 1946 continued in 1947.

Not only has there been an alteration in the total volume of national expenditure, but its character has also changed. Government spending reached an all time high in 1944 at \$5,105 million. It fell sharply during the succeeding two years, being \$1,843 million in 1946. This decline of \$3,262 million in government outlays over a two-year period was largely offset by an increase in private expenditure on consumer goods (\$1,447 million) and on capital goods (\$1,123 million), the total increase amounting to \$2,570 million. It should be observed in this connection that 1946 brought a rise in the value of inventories for the first time since 1942. Moreover, the dollar value of inventories (\$475 million) is larger than that of the previous high (\$368 million) reached in 1940. Granting no outside disturbances, e.g., war, there is considerable justification in assuming that the trend in national expenditures described for the years 1944-6, namely, decreasing government and increasing private spending, will continue for some time. The preliminary figures for 1947 support this view. In case of a

¹¹Cf. Maclean-Hunter Publishing Company, *Business Year Book, 1947* (Toronto, 1948), pp. 21-3.

business recession, however, we can look for a revival of government expenditures on a large scale to compensate for the decline in private investment which occurs during a "depression."

An examination of the data presented in Table I shows that the gross national product rose from \$5,141 millions in 1938 to \$11,656 millions in 1946. In other words, the gross national income more than doubled in eight years: During the same period the net national income increased from \$3,972 millions to \$9,617 millions, a rise of \$5,645 millions or approximately 150 per cent. But the increase in *real* national income was considerably smaller. The rise in the general price level between 1938 and 1946 accounts for much of the apparent increase in national income. The sharp increase in the national income estimate for 1947 as contrasted with the previous year in large measure reflects the rise in prices incident to the removal of war-time controls. Despite this price movement qualification, the data presented in this chapter point to a spectacular increase in real national income which resulted from technical improvements and full employment of our labour resources which prevailed during and after World War II.

The following index numbers¹² for wholesale prices and physical volume of business in Canada indicate roughly that real national income increased to a greater extent than prices during the period 1939-46.

Year	Index Numbers of Wholesale Prices* (1926 = 100)	Index Numbers of the Physical Volume of Business† (1935-9 = 100)
1939	75.4	108.1
1940	82.9	125.8
1941	90.0	146.9
1942	95.6	164.2
1943	100.0	176.6
1944	102.5	183.0
1945	103.6	174.3
1946	108.7	171.8

*Source: Dominion Bureau of Statistics, *Prices and Price Indexes*, Nov., 1947.

†Index was furnished through the courtesy of the Dominion Bureau of Statistics.

¹²An index number is a device for measuring quantitative changes over time referring to a base year considered as 100. See Chapter xxv.

A study of these index numbers reveals that, whereas wholesale prices rose by 27.1 per cent between 1939 and 1944, the physical volume of business increased by 74.9 per cent. For the whole period, 1939-46, the rise in the two indexes was 33.3 per cent and 63.7 per cent respectively. The increase in the national income figures (Tables I and II) for 1945 and 1946 when contrasted with the decline in the physical volume of business index reflects the general rise in prices.

It will be apparent from the foregoing discussion that *the national income* is a concept of great economic significance. The magnitude of the real national income relative to the size of the population has a very important bearing upon the economic welfare of the people in a given country. The factors affecting the size of the national income will be discussed in subsequent chapters. This subject involves not only the quantity, quality, and organization of a country's resources, human and material, but also the much discussed problem of saving, investing, and full employment. But the size of the national income is not the only factor governing economic well-being, its distribution is also significant. Obviously "poverty in the midst of plenty" is not an ideal state of affairs. This topic (distribution) will receive due consideration. In fact, the size and distribution of the national income will constitute a background for most of the discussion which is to follow. But in the next chapter we shall consider how the national income is consumed.

CHAPTER V

CONSUMPTION

OBJECTIVE Considerations: (a) Consumption and Savings.—

The whole national income as it comes to people in money form is utilized in one way or another. Briefly, it is either consumed or saved. American investigators found the national income of the United States amounting to 93 billion dollars in 1929 distributed to various purposes in the following proportions:¹

	(billions)		(billions)
Food.....	19.8	Other living (including	
Attire.....	11.1	taxes).....	22.7
Home maintenance.....	21.5	Savings.....	17.8

Savings thus amounted to about 20 per cent of the national income as contrasted with 80 per cent consumed in that unusually favourable year. To say that this amount was saved, however, is not to assert that it was not spent. For while saving in the first instance means for most of us saving money—putting it in the bank or other financial institution—for others it means direct investment in enterprise or in a home, and even in the first case investment takes place at one step removed through the bank lending, perhaps, to some mercantile or manufacturing firm. The material expression of this saving, were we to follow the matter through, would be found in an increase in durable goods—producers' and consumers'.

(b) **Influences Affecting Proportions in Expenditures:** (1) **Size of Family Income.**—Various circumstances affect the proportioning of income for consumption. The most important of these for which we have authoritative data are the size of the family income and the size of the family. Table v drawn again from American experience presents us with an interesting exhibit of the former.²

¹M. Leven, H. G. Moulton, and C. A. Warburton, *America's Capacity to Consume* (Washington, 1934), chaps. vii and viii. Critics challenge these authors for including capital increase in the compilation of total income and of savings. But see *supra*, p. 32. The proportion between expenditures and savings for Canada is presented above in Table iv, p. 46.

²Calculated from *ibid.*, p. 257. For more detailed distribution, consult United States Bureau of Labor Statistics, Bull. 357; also L. D. Edie, *Economics: Principles and Problems* (New York, 1926), pp. 81-3.

TABLE V
PERCENTAGE DISTRIBUTION OF FAMILY INCOMES
According to size of incomes (Non-farm families)

Income class (in dollars)	AVERAGE PERCENTAGE EXPENDITURES				
	Food	Home	Attire	Other living	Savings
0-1,000	46.7	32.5	14.2	14.3	....
1,000-1,500	39.2	28.8	14.4	16.8	0.8
1,500-2,000	35.0	27.0	14.4	17.8	5.7
2,000-2,500	31.4	26.0	13.4	21.1	8.1
2,500-3,000	28.2	25.3	12.8	23.4	10.3
3,000-3,500	25.4	25.4	12.1	24.8	12.4
3,500-4,000	23.0	25.7	12.0	25.8	13.6
4,000-4,500	21.2	26.2	11.5	26.4	14.6
4,500-5,000	19.4	26.4	11.2	26.6	16.4
5,000-6,000	17.2	26.7	10.8	27.1	18.1
6,000-7,000	15.0	26.6	10.5	27.4	20.4
7,000-8,000	13.4	25.9	10.2	27.5	23.0
8,000-9,000	12.2	24.8	9.7	26.9	26.4
9,000-10,000	11.2	24.2	9.5	26.4	28.7
10,000-15,000	9.5	21.7	8.6	24.7	35.4
15,000-20,000	7.5	20.9	8.1	25.0	38.4

From this table it will be seen that the lowest wage groups spend 46 per cent of income for food alone whereas the wealthiest here shown spend only 7.5 per cent. As the income class rises, the proportion going to clothing is constant until we reach the 2,000-2,500 bracket after which it declines. Expenditures on the home follow a varying course being largest among the very low incomes but after a drop rising again among the well-to-do only to fall off again among the rich. (Other studies bring out that rent and household maintenance—including furnishings—considered in two separate categories run in close correspondence among incomes below \$3,000.) Especial significance attaches to changes in "Other living" which rises consistently in its proportion until the 7,000-8,000 class is reached. In this increase, along with the rise in savings, we find the mathematical explanation of the rapidly falling percentage spent on food. Under it are included education, recreation, travel, and a large part of what we include in life's comforts and luxuries. The more essential explanation lies in the comparative expansibility of many wants of this nature. Generally

speaking, a high percentage—twenty-five or more—going for items other than food, clothing, and shelter indicates a condition of comfort and offers the basis of progressive living. When the proportion falls far below 20 per cent, the conditions become such that the family is debarred from many utilities that are now regarded as essential to the satisfactory life. When 40 per cent or upward of the income is turned to food expenditure, it usually indicates a condition of poverty. These have come to be viewed as principles well established, being corroborated by investigations in Europe as well as America.³

Distribution of National Income as Affecting the Proportions Used for Various Goods.—A further lesson may be drawn from Table v. It should be evident that what a whole society will consume will depend to a large extent not only upon the aggregate income of the nation and consequently the average income per family, but upon the distribution of the total income among families. In a society where incomes and wealth are fairly evenly distributed, consumption will be very different from what it will be in one where they are largely lodged with 10 per cent of the people while the rest of the population live on less than \$1,200 per annum per family. There is every reason to think, moreover, that a greater total enjoyment of utilities results when economic distribution is not grossly uneven. We shall have occasion to refer to this again.

Further Analysis of Proportioning.—Investigators have carried into further detail than that given in Table v the effect of the size of income upon its proportioning for different purposes. For instance, the general category food has been analysed and spread to find out what happens among different items of food. A study in 1909 revealed that the absolute amount spent on bread and flour and potatoes changed very little on the average as the family income increased from \$9.73 per week to \$38.93. It showed, however, that the amounts spent on green vegetables, butter, and eggs doubled—considered jointly and severally—while those spent on meats, fish and poultry, cakes, crackers and rolls, fruits and jam, more than doubled.⁴ An analysis of clothing expenditures again as found in an American study of wage-earners in 1918-19 disclosed that as family incomes increased from the “under \$900 income group up to the \$2,500-and-over” group the percentage of total income expended

³See H. R. Kemp (ed.), *Canadian Marketing Problems* (Toronto, 1939), pp. 126 ff.

⁴Hazel Kyrk, *Economic Problems of the Family* (New York, 1933), p. 345.

on the maturing daughter (over fourteen years of age) increased, while that spent on her brothers and younger sisters decreased.⁵ The percentage expended on the father's and mother's wardrobes held up until the \$1,800 level was reached after which it fell off in both cases.⁶ Another computation based upon the same study examined into the change in various particular items included in the category "miscellaneous items." It showed that the percentage of total income spent upon music increased more than six times from the lowest income group up to the \$2,500-and-over class; that that spent on theatres, concerts, picnics, and excursions increased nearly three times; that on automobiles, motor cycles, and bicycles twenty-one times. On the other hand, the percentage spent on medical services and supplies, that on tobacco and liquor, and that on insurance all fell off as income increased.⁷

(2) **Influence of the Size of the Family.**—The next observation we have to make is that division of income to the different items is affected by the number of members in the family. A recent Canadian study throws light upon this very important consideration. Summary findings are presented in Table VI.⁸

The proportion of expenditure used for food in these British Canadian families mounted steadily from 24.6 per cent for one child families to 35.1 per cent for families with five children. The proportions for clothing showed a more moderate rise from 9.6 per cent to 11.2 per cent between the same groups. These increases were balanced by falling proportions devoted to housing, furniture, transportation, recreation, and savings.

The relation between number of children and expenditures is brought into bolder relief when the latter are stated in absolute figures spent on an average on each person in each size-type family. Such figures show pronounced decreases in practically all items. The average total expenditure on each person fell from \$516 to \$218, as we proceed from the one child family to the five. Expenditures per person on food dropped from \$127 to \$74 (figures not given in table). Corresponding amounts for housing were \$96 and \$33, this decrease coinciding with a reduction in the number of rooms per

⁵*Ibid.*, p. 342.

⁶United States Bureau of Labor Statistics, Bull. 357, Investigation of 12,096 wage-earning and lower-salaried families.

⁷Kyrk, *Economic Problems of the Family*, p. 358.

⁸*Family Living Expenditures in Canada* (Ottawa, Dominion Bureau of Statistics, 1939).

person from 1.5 to 0.8. Clothing averages in the one child and five child family groups were \$49 and \$24 per person respectively. Pronounced decreases in the average amounts spent per person were likewise discernible for health care, recreation, and transportation, the drop in each case far exceeding that in food and clothing.⁹

TABLE VI

DISTRIBUTION OF URBAN WAGE-EARNER LIVING EXPENDITURES ACCORDING TO
NUMBER OF CHILDREN PER FAMILY

(For the year ended September 30, 1938)

Racial origin.....	British families					
Number of children per family...	1	2	3	4	5 and over	Average (2.3)
Number of families.....	343	382	245	116	49	1,185
Food..... Percentage	24.6	26.1	29.0	31.5	35.1	27.2
Housing..... "	18.6	17.6	16.0	16.4	15.7	17.3
Capital expenditure on home..... "	0.7	0.8	0.5	0.1	0.0	0.6
Fuel and light..... "	5.9	6.3	6.6	6.9	6.5	6.3
Clothing..... "	9.6	10.0	10.5	10.7	11.2	10.1
Household operation.. "	1.9	1.9	1.7	1.6	1.4	1.8
Furniture..... "	6.3	5.9	5.4	5.8	4.1	5.8
Health..... "	4.3	4.0	4.8	3.2	4.1	4.2
Personal care..... "	1.6	1.5	1.6	1.5	1.5	1.6
Transportation..... "	7.1	5.8	5.4	4.3	3.9	5.9
Recreation..... "	6.3	5.9	5.9	4.9	5.2	5.9
Savings..... "	9.4	10.1	8.8	8.8	8.2	9.4
Children's education and vocation..... "	0.9	1.3	1.6	1.9	1.2	1.3
Community welfare and gifts..... "	2.8	2.8	2.2	2.4	1.9	2.6
Total expenditure.... "	100.0	100.0	100.0	100.0	100.0	100.0
Total expenditure..... Dollars	1,548	1,632	1,584	1,619	1,523	1,590
Average expenditure per person..... "	516	408	317	270	218	370

Other Influences.—Other influences affecting consumption, susceptible to statistical measurement, are age and occupation. In the

⁹Similar study among French-Canadian families showed results paralleling the British in almost every particular.

same Canadian study it was found that as the family was longer established, i.e., as the parents and children were older (comparisons being made by ten-year differences in establishment), there were increasing amounts spent per family and also per person for food and clothing, but decreases per person for housing, furniture, health costs, and recreation. Doubtless an important factor today in affecting the proportion in national consumption is the changing age composition of our population. In the American study already quoted (Table v) a comparison between farm and "non-farm" families shows conclusively for incomes of more than \$1,000 that non-farm families spent more on all four categories of expenditures, *food, attire, home, and other living* as against the larger *savings* of the former: and also among the four categories, the greater excess by far of the urban dwellers was on *home and other living*. Another observer finds that farm families have slightly better food than industrial workers, that they place less emphasis on clothing, that they live in bigger houses but have fewer modern conveniences.¹⁰ Comparison between urban groups of diverse occupations, such as bank employees and garage mechanics, would doubtless be revealing.

Changes in Consumption.—Changes in consumption habits over periods of years reflect the influence of many factors. Invention in consumers' goods, by placing new and attractive products in competition with the older commodities, acts directly upon the proportioning of the family income. Invention in producer's goods operates indirectly by changing the relative prices and sometimes the qualities of different consumers' goods, which, in turn, results in changing the relative amounts of the latter that will be purchased and consumed. Some idea of the uncontrolled drift of wants was suggested some years ago by a student of family expenditures among the Civil Service group of Washington, D.C.¹¹ Her estimate was that family and housekeeping machinery including automobile, radio, phonograph, and telephone, and various household appliances like vacuum cleaners, sewing machines, and refrigerators cost the average family \$1,000 more in 1928 than in 1900; that the race for health, involving doctors, dentists, oculists, druggists, children's tonsils, inoculations, sun baths, summer

¹⁰Dr. Elizabeth E. Hoyt, *Consumption in Our Society* (New York, 1938), p. 308.

¹¹Eunice Fuller Barnard, "What Our Parents Didn't Pay For" (*Survey Graphic*, Nov., 1928).

camp, etc. added \$530; that education with its longer span had staked out its greater claim; and that light luxuries in diet, dress, and recreation had entered solidly into the standard of living. Such features as ice cream, coffee, cigarettes, cosmetics, silk stockings, motion pictures, little known to their parents, were economic realities to the generation maintaining homes in the late twenties.

Other than invention, basic factors bringing permanent changes in the consumption pattern are changing population density, changing institutional emphasis, increasing amounts of leisure, culture contacts with other peoples, and vanishing resources.

CONSUMPTION ANALYSIS

The Meaning of Consumption.—Consumption is connected directly with the satisfaction of our wants. So far as economics is concerned it is an end in itself. Through it we have enjoyment and experience of *feeling states*. In a truly functional society all other phases of economic effort—production, exchange of goods, etc.—would be carried on that, through it, satisfaction and enjoyment might take place to the full extent of human possibility.¹² Utilities that lurk in goods and services of persons are the answer to wants. Consumption is the utilizing and destroying of utilities. It is not necessarily the destroying of form or material. Sometimes it makes no change in the form of the good. The lady's hat that goes out of style is physically what it always was but its utility has vanished. Utilities, therefore,—not material wealth—are the true economic reality. We speak of pounds of sugar, tons of coal, and yards of cloth, but what we are really interested in as consumers is sweetness (and calories possibly), warmth, and stylish appearance.

In our effort at economic analysis, utilities present serious difficulties in connection with their comparison and measurement. For they are unlike and qualitative, and again they are experienced by different persons. Utilities associated with a loaf of bread are on quite a different plane from those embodied in a set of golf balls. In spite of this the individual can measure the two against each other, and either against the utilities of any third good or service of which he has knowledge. There is no effectual way, however, that the utilities of any of these can be measured or compared between individuals. Utilities and utility scales (of which more later) are secrets of the individual mind. This point should be understood.

¹²Some would qualify this by saying that in an ideal society some economic effort would take place on the basis of work for the joy of working.

We shall carry forward our analysis of consumption under three main heads, involving three distinct though closely interrelated sets of phenomena, viz., (1) economic wants, and (2) our manner of choosing, and (3) using, the goods (utilities) that satisfy them.

THE NATURE OF WANTS

The Main Issues.—The chief issues regarding wants are the following: First, how far are they dependable in their objectives and trends, and hence how predictable? Second, to what degree are they to be considered as primary data for economic analysis existing with consumers as independent forces; to what degree dependent upon other elements in the economic process, notably the controlling influence of producers and sellers? Third, how far are they rational?

All three questions lead us to inquire first into their origin and derivation.

Psychological Basis of Wants.—Wants are the motivating forces of human behaviour. They begin with the babe's first conscious expressions of life and increase in number and in clearness as the years go by. With the new-born infant they are very vague. In fact the early expressions of something lacking can scarcely be called wants in the psychological sense. They are rather merely evidences of discomfort suggestive of needs of the organism. The babe has no patterns for looking to the outer world of things and persons in order to bring them to bear upon its needs. Infantile life is a matter of reflexes and vague impulse toward activity. The incubated chick ere long knows what it wants without teaching and proceeds to turn the world to its uses, but the human babe seems quite without orientation. Progress in living is a matter of defining wants as well as of answering them. Life is in one sense a matter of expanding wants, and life in a civilized society will result in more wants than life under primitive conditions. A youth today will have more wants than his grandfather did at the same time of life. Wants are essentially malleable.

Wants, therefore, would seem to be derived from the group life. Back of this, and urging to activity, are the needs of the organism. Giving rise at first to random movements, these needs in the first months of life are all-important. Later, though giving place more to social influencing, they still play a vast part in originating and promoting wants. These organic urges differ in nature and in their potentialities for giving rise to wants at different times of life. Apart altogether from environment the man of twenty will have different

wants and wishes from a lad of ten. The organism must not be discounted as a driving force in want creation.

The picture of the development of wants is thus a dynamic one. Through the life-long confluence of organic urges and social influences the external world acquires significance or value to the individual. As time passes he organizes his behaviour with respect to it, being attracted to some things while finding nothing to desire in others.

Economic wants do not need to be differentiated from others except to emphasize that they concern themselves with goods that are scarce.

Social Control of Wants.—Social influences may be treated under two categories. First, there are the deliberate efforts at control coming from business firms interested in developing wants favourable to the sale of particular commodities or brands. The purpose of advertising and salesmanship is to stimulate and build up particular wants. When a firm advertises its product or puts a traveller on the road, it does so in the expectation that consumers' desires for that product will be so stimulated that sooner or later sufficient additional quantities will be purchased more than to make up for the extra selling expense. How the desire for a commodity is brought into existence through reading about it or seeing it in pictures in the advertising section of a magazine is within the experience of every one of us. How the desire for commodities already known is intensified is even more familiar. It is an erroneous view of modern economic behaviour which looks upon consumers as persons with wants already formed waiting to answer them in the order of their strength by purchasing appropriate goods. Even when left to himself, new wants break in upon the established order of those already reigning and demand a place for themselves. The process of developing wants is a part of the larger life process. To sense a new thing may be to want it. To see a familiar commodity in a new light may lead us to want it more.

Modern business makes the most of this dynamic ever-incomplete condition of the consumers' alignment of wants. To the degree that the consumer is vague, it seeks to define his wants for him. To the degree that his mind is for the moment clear on what he wants, it attempts to build up wants for its own product that will be stronger than some of those already existing. Before it can expect to sell its goods to him it must first arouse desire. How the advertiser plays upon the mind of the consumer to get the desired

result is scarcely for us to describe in detail. It is a matter of attracting attention and keeping the idea of the product before him as much as possible in the hope of awakening an interest. Once interest is captured, desire will follow. All possible devices are used to make his mental experience of the product as pleasing as possible. Appeals are made to his feelings, memories, habits and impulses as well as to his reason. Knowing the close relation between sense reactions and mental states, colour is used in lavish quantities and the appeal is associated with other pictorial features having little or no relation to the product, but calculated to induce the emotional condition satisfactory to the smooth development of the want. The principle known to psychologists as the conditioned response is thus set to serve the practical uses of business. Many wants are created in the first instance, and many more are promoted and intensified by these activities of business men. Many of the commodities that we look upon as essential to civilized and comfortable living would never have come into popular use, as they have, without some such forceful way of carrying them to the people. The radio might have spoken for itself but most new things would not. Wants are created by new inventions but only to the degree that the latter become known. Advertising and salesmanship provide in some degree the necessary knowledge. The number and the quality of a people's economic wants are in a sense the measure of its civilization.

The wants created and developed through these means are not always to the consumer's advantage. They are not founded upon a dispassionate presentation of the facts about the goods and the consumer is led into placing undue temporary emphasis upon a particular want. The whole statement of the case, being primarily for the advancement of the producer's interest rather than the consumer's, is not likely to be in proper proportion. That it leaves out things that should be said and that it over-emphasizes points that are not of vital importance, and again that the representations are made in an atmosphere specially prepared to stimulate their reception—all this means that the want is stimulated artificially and far beyond the power of the utilities of the commodity to satisfy it. There may be times when a seller is a better judge of a consumer's wants than he is himself, but, in the main, we stand for the right of the consumer to develop his wants himself on the basis of facts. Any influence that operates to make him less than himself and plays up a particular want by means of a reiterative technique or through continuing persuasion, is calculated to put the whole framework of his scheme of wants out of proportion.

In the second place, our wants are controlled at all times by the general cultural influences coming from our social environment. Whether we realize it or not—mostly we do not—we are controlled in the main currents of our mental life as well as in our outward behaviour by the people all about us. We want to be distinctive but our distinctiveness, for the most part, moves within rather narrow limits. We want, in the main, about the same that others want. Our wants for food and dress, while varying in slight degree, run according to the customs of the community. The same is true of houses and automobiles and sports. When the styles change the wants of the individual persons in the community change. We follow the norm of the whole group as the individual bees fly in the swarm. We may buzz off from the centre a little way and flatter ourselves about our independence and yet we mostly move with the swarm.

In some wants we are more definitely controlled than others. When a mother is choosing food for her young children, she will be guided by the vitalizing and growth-giving content of the various dishes, whereas, if she is giving a formal dinner to her friends, she will be concerned more about the foods being conventionally appropriate, about their being expensive and varied, and, finally, that they shall give her an opportunity to show off her china and linen to advantage as well as the creative powers and superior skill of her cook.¹³ Yet, even in the case of the children's meal what she will serve will depend in considerable degree upon the general social habitat. The Italian mother will provide something different from the German.

In addition to these general currents of social control, there is another set of influences, emanating from our mental association with a more limited group of persons, which are closer to our consciousness—which are, in fact, of our own choosing. In part, deliberately, and in part subconsciously, we pattern our wants after those of the people we admire or wish to emulate. The high-school girl does homage in this sense to her favourite movie star, the boy follows the trail of his athletic hero, the society woman reaches out toward the standards of the leaders of her "set," and most of us are solicitous more or less about having the same outward things that people of more purchasing power than ourselves are displaying.

Standards of Living as Affecting Wants.—The standard of living is "the number and variety of wants which a given class of people

¹³Hazel Kyrk, *Economic Problems of the Family* (New York, 1933), p. 386.

at a given time and place deems it necessary to satisfy." It is not merely a collective name for all the commodities actually used by a group at a given time, "but for those which are so related to one another, and so important to the consumer that if any one of them is lacking, forces to restore it are immediately put into action." It thus includes the essential things—or at least what the group considers essential, and what it insists upon.¹⁴ We speak of wage-earners, professional people, and farmers having different standards and of an American standard of living as contrasted with a European. So far as the individual is concerned, as a member of the group he has certain consumption practices imposed upon him. He must wear clothes up to the standard of his group. He must have a car of definite qualifications. He must live in a house not below certain standards of appearance and comfort. He must give his children a chance at university education or its equivalent. He does not have to follow these practices, of course. He may assert his independence and wear corduroys, but the chances are he will not. As a member of the group, he is subject to the same state of mind as the others. He has much the same sense of values and gives expression to them in attending to much the same specific wants.

Standards of living are thus in essence a psychic affair determining for the members of a group the general nature of its wants through possessing the minds of the various individuals. They are themselves in large part social products. They have their origin in the communication of mind with mind. As sure as people communicate freely with each other they will develop a commonality of ideas, attitudes, and mental states. One aspect of this common condition will be their economic wants. Group standards owe their distinctiveness to the group background. We derive our ideas from the past and in this sense our want standards are a part of the social heritage that comes down to us. To borrow from the language of the sociologists, they are a part of the current mores. "They are folkways with doctrines of welfare implicit in them."¹⁵ As such, we are led to conceive of them as rising out of the cumulative experience of a long past. Ideas and practices are handed down from generation to generation. They are enriched with the inventions and dis-

¹⁴The term is often used in treatises on population where it refers to those wants which the parents in a group set up as more essential than the desire for further children.

¹⁵Kyrk, *Economic Problems of the Family*, p. 376.

coveries of each generation as it plays its part on the stage, and with all the benefits that arise from contacts with other peoples. As these new elements have come into the life of the group from time to time, they have given rise to new wants which, in the course of experience, have been assimilated with those previously existing and the whole brought into balance again. Thus do we get the picture of our current standards of living as a result of the digested experience of the life of a people as regards its wants. They are not to be lightly regarded or easily discarded because they are well tested and carry the notion of well-being.

There are, however, the currents of contemporary influence that are always playing upon us and challenging the standards of the past. As time goes on they will be absorbed in turn into the general stream of tradition and become an enriching part. But, at present, change is so rapid that contemporary influence is playing a greater part in defining our wants than ever before. While custom and tradition govern some parts of our consumption, as, for example, the foods we eat and the education we aspire to, contemporary influences play a great part in defining our wants for clothing and recreation. Invention, changing styles, and consumers' desire for novelty and new devices for distinction are all contributory to the condition of change. But especially significant for our consideration is the ever-increasing role of the producer in shaping the total of our desires.

Fashions and Fads.—A significant feature in the social definition of wants is the influence of fashions, styles, and fads. In some measure these are promoted by producers' interests concerned with increasing sales. But back of this, is the consumer's desire for novelty, distinction, and recognition. Unless these qualities were dormant in people, it is hardly probable that producers could continue to impose their round of fashions upon us with all its economic waste. With styles once accepted as a feature of the mores, society becomes regimented into a great routine organization of leaders and followers. It is the financially more capable and the social élite that seek distinction through leadership in styles. A larger section of the population follow these leaders closely, and achieve recognition and prestige through being "up-to-date," in conformity with the approved leadership. The rest follow at a distance conscious of their inadequacy to maintain the pace, but envying the better equipped. A few there are who question the wisdom of the whole folkway of practising style-changing, contending that it is slavish and wasteful,

but their voice is little heard in the march of the great procession. No feature in our whole scheme of social life is more important in influencing economic wants than the changing of styles. It is more significant today than it has been in the past because it is affecting more commodities. When we think of the peasant costumes of some of the peoples of Europe remaining static as to form and colouring from generation to generation as well as of other standardized features of their way of life, and compare them with our own rapid round of recurring change in clothes, automobiles, etc., we cannot fail to be impressed. Fashions do not control us equally in all departments of consumption. They have not controlled our daily food wants to any large degree. Changes are not lacking but they are not style changes, but run rather in relation to new inventions and changing ideas about nutritive content.

We witness effects of *fads* from time to time especially in their control over our recreational activities. The cross-word puzzle craze was a case in point and its successor, the picture puzzle, gave rise to an industry during the depression of the thirties.

Pecuniary Emulation.—Competition as applied to spending practices is consistent with the whole mental habit of a thoroughly competitive order. Such emulation involves countless ways of displaying luxury and extravagance. Prestige is sought through ostentatious expenditure. The leisure classes at the top set the pace and others try to follow. The newly rich are especially conspicuous in the practice because their need of establishing themselves socially is greater, and, moreover, they are crude and naïve in their methods. The principle is of great significance in our whole consumption habit. It ties in neatly with the fashion folkway to make the domination of fashion more complete. It provides an argument for the salesman and the advertiser. It makes the financial inequalities of modern society stand out in deeper relief as the low income classes attempt to emulate the practices of the higher. While it is not essentially modern, being a matter of every individualistic economic society, it is modern in the variety of wealth forms through which it may find expression. Two centuries ago, display took the form of conspicuous leisure, the English landlord being concerned with living the life of a "gentleman" supported in his leisurely way of life by an almost equally idle group of retainers. Where riches are held in high esteem and where wealth is the chief repository of power, men are likely to be judged by the size of their incomes and the dramatic expression of the latter in conspicuous

spending. Pecuniary emulation is an important factor in guiding the process of want formation. Were we free from it our wants would not exist in their present proportions.

Other Factors Affecting Wants and Particularly Want Expansibility.—Certain other factors are based partly on the nature of our physiological functioning and partly on the relationships among goods as they lend themselves to the satisfaction of our wants. As we consume successive units of a commodity—let us say apples—within a brief period of time, we soon reach the point where our desire for the commodity ceases. This tendency for the appetite to fall off as more and more units are taken is known as the *principle of diminishing intensity of desire*, or, viewed from a different angle, the *principle of diminishing utility*. This is a universal principle of consumption affecting all goods. So far as many goods are concerned a large number of the members of society satisfy themselves completely with respect to them each day. For other commodities, unless we are very rich, we never carry consumption to the point of complete satiation. After carrying it some distance, we reach the point where our desire for something else of no greater cost is found to be keener than our desire for further units of this good. At this point we cease consumption of the first good and turn our attention and our money to the purchase of the other. Considering the whole field of our wants, the various goods for satisfying them, and also the limitations of our purse, our economic consumption is a continual practice of choosing a little of this good and a little more of that, to the end that the utilities derived from the last units of various goods used are held in balance. It is significant to note that we never get all our wants satisfied. We may succeed in satisfying some wants but others are always snapping into focus and taking their place. While particular wants are satiable, wants as a whole seem to be capable of indefinite expansion. A further point of equal significance is that our desire for various goods diminishes at different rates as we consume more and more of them. For beef or for potatoes at any point of time, it comes to a dead halt rather suddenly. For our desire for personal adornment, or books or beautiful rugs, it does not fall off with the same suddenness. These goods have the quality of giving almost indefinite enjoyment. They are elastic and expansible.

A second principle has to do with recurrence of desire. Granted that a want has been in whole or in part satisfied, it almost always has the tendency to come back again. The desire for apples falls

off and disappears as one after another is eaten in a brief interval. Allow the passage of twenty-four hours, however, and the appetite will have returned. Desire may be as intense as before. With other goods the period required for the reappearance of the appetite may be longer, or shorter. A great many people only desire fish for dinner once a week whereas they eat bread three times a day. People say they derive great pleasure from going to the circus, but once a year is enough. On the other hand, many of us can take pleasure in light opera as often as twice a week. Wants for some goods, on the contrary, have no definite time of recurrence. They seem to exist in latent form and may be readily revived by social influences—often by advertisements.

Contrasting with diminishing utility of successive increments of a good during a brief period is the increasing satisfaction from many goods *considered over longer periods*. This is particularly true of goods associated with our main cultural interests. We grow in appreciation of music, architecture, figure skating, and the accessories of religious expression. But in fact the application of this tendency is very wide. Satisfaction from most things, from watching hockey to eating cheese, develops with attention and continued patronizing. This long-term, positive principle of want development, it should be observed, is not opposed to the short-term negative principle of diminishing utility. Its effect however is to expand the want, whereas that of the latter is to limit it.

The satisfying of the desire for a commodity has an effect upon one's desire for other commodities. The explanation may be found in organic nature in the physical relationships among the commodities themselves or in our socially derived ideas about them. As a boy consumes successive apples, his desire for grapes lessens as well as his desire for apples, but possibly his appetite for beefsteak will have quickened. As one completes a two-hour session at the movies he has little desire for two hours at the opera but he is all agog for a game of tennis. A special variant is where goods are associated in their use—sometimes in a compelling way—as where one buys a house and across the years has his consumption pattern affected by the need for furniture, equipment, repairs, taxes, insurance, etc. Again there are examples of goods that are immediately complementary as where the purchase of a coat of a particular style and colour creates a want for a hat that may be worn in good taste with it, or where satisfying the desire for a riding horse gives rise to a want for a riding costume.

Expansibility of any desire, therefore, is dependent upon four factors, viz. (1) the speed with which intensity falls off as successive units are taken, (2) the degree of possibility of influences of any kind affecting the intervals of its recurrence, (3) the extent to which the want itself may develop through the experience of its own satisfaction and finally, (4) the manner in which it is influenced by the satisfaction of other desires. These explain the changing proportions of society's demand for different kinds of goods, the demand for some goods tending to grow while that for others seems to stand still, or even decrease.¹⁶

A Classification of Wants on the Basis of Their Comparative Expansibility.—Classifications are usually made with respect to some purpose and particular point of view. A classification of desires that would best serve the purposes of the sociologist or the community organizer would be of little value to the economist. Here we are interested in inquiring further into the varying degree of plasticity and expansiveness of different types of consumers' wants, because discoveries in this field explain much about the changing trends in modern economic expenditures, and throw considerable light upon the changing nature of our industry. For this purpose wants may be classified as follows:

(1) Those arising directly out of the needs of the human organism. These find expression in hunger, thirst, sex appetite, discomfort due to temperature and climate, etc., and seek their answer in necessary food, clothing for protection, housing for shelter, etc. They illustrate the phenomena of rapidly diminishing intensity. The intervals of their recurrence are not subject to change or control. As whole groups they are not greatly affected by the satisfaction of other wants, and they undergo relatively little development across time. When a man is hungry he must have food. There is nothing else that will take its place. For a given population, therefore, wants of this type are not susceptible to great variation. Some leeway there is, of course: some response to social or physical influences. A people may change their total food wants, for example, by developing out-of-door habits of life. They may require more clothing and less food as a result of sedentary living. Such wants will vary considerably with changing age composition. But, in the main, they are not capable of great

¹⁶Present rate of consumption will be in terms of (1) as above and (2) existing rate of recurrence, and (3) present relations with competing and supporting goods.

expansion. A million people require a fairly definite quantity of calories. If they get them from wheat they will need a fairly definite amount. If they consume a quantity of rice or potatoes they will require less wheat. The total type-want for food does not change.

(2) Those arising out of the refinements of taste in answering organic needs. Not wheat but shredded wheat is demanded; not broadcloth and shelter from the storm but soft silks and carpeted homes; not a cot to rest upon but a sleep-inducing ostermoor mattress. Table diet contains an ever-increasing proportion of articles appealing to the appetite through flattering the senses of sight, taste, smell, and all that pertains to the aesthetic. Consider the appeal as well as the comfort of modern dress. These desires respond less readily to the principle of diminishing intensity. They are less definitely susceptible to impairment through the consumption of related goods. They are influenced greatly by styles and intensified by salesmanship. They are more capable of expansion. The farm population shrinks but the number of workers in fancy biscuit and chocolate plants widens as does the population of vendors of refrigerator-cooled phosphorated coca-cola, orangeade, etc.

(3) Those having their origins mainly in the social environment. Among these we may single out (a) those originating in the wish to appear well in the eyes of our fellows. This characteristic is rooted deeply in human nature and very far-reaching in its effects. It gives a social orientation to the greater part of our activities and enters into the making of almost all our standards. As individuals we must conform in large measure to what our society holds in esteem lest we be considered odd, uncouth, ignorant, or unsuccessful. If it is tuxedos we must have them, even though the old swallow-tail is hanging in the closet. If it is sports models, the coupé will not suffice. Here is where fashion enters and works its ravages upon our pocket book. Here is where class divisions have their influence upon purchases. The agent at the door says the lady in the big house up the street took one. We would sooner starve our bodies than have the Joneses get a lead. For we not only consume goods but we consume them in the presence of others. Such wants have little reference to the organism and as a total are expansible almost without limit. They seem to advance their claims upon our income *pari passu* with its increase and the degree of our socialization. They take hold with varying strength upon different portions of our population. They are in some small degree susceptible to educative influence.

(b) Those attributable to the presence of social institutions. Each institution tends to turn our attention and consequently our substance toward the idea and purpose for which it exists. To become a church member is to add to one's financial responsibilities, for the church is a great director of consumption. The modern church is a greater stimulator of wants than that of the Puritans. Protestant churches differ in some sense from Catholic. Similarly our military and educational institutions directly and indirectly determine our consumption. Generally, as the institution expands and intensifies its hold on the life of a people the greater will be its influence in determining consumers' wants. Prominent among institutions in this respect and developing rapidly with the increase of leisure are those concerned with entertainment and pleasure. Naturally such wants are expansible according to the quality and functioning of the institution.¹⁷

¹⁷Wants of course are a matter of the individual mind. Practically, however the mention of institutions suggests the necessity of compromising in some instances the purely individual concept of wants. So far as children are concerned their wants, for purposes of economic analysis, are a compromise between their actual desires and what their parents think they should have, with the latter feature in the well-regulated family predominating. With institutions involving mature persons, again, wants of individuals are subsumed in the general will of the whole body. In the case of the State in particular, as the institution with compulsory power over the individual, the general will as expressed through public expenditures is frequently far removed from the individual citizen's feeling of keenest wants.

CHAPTER VI

CONSUMPTION—(Continued)

CHOOSING THE GOODS

THE ISSUES.—Wants have been described as acquisitive attitudes developing in persons and becoming progressively defined under various organic and social influences. Economic wants are directed toward utilities and services that are not free but purchasable in the market. The prospective consumer being limited in purchasing power cannot have them all. Rather he is compelled to undertake an active task, viz. that of choice-making. Choosing, while associated closely with the final stages of want definition, stresses the idea of comparison. It directs attention to the goods and away from the person experiencing the wants. Choices involve not only wants, but the amount, and the range of goods and services, and the sequence of the latter in time.

The chief issues are:

- (1) Have we sufficient knowledge of goods to choose among them? Do they fulfil our expectations of them?
- (2) Are we rational at the time of choosing?

Factors Affecting Choices: Variety.—The goods a people will use are always limited, and in some sense directed, by the type and capabilities of its industrial system. Modern industrial technique and the application of natural power have increased the amount of goods available for use many times over. An increase in the amount of all goods will change the proportions in which they will be taken even though the goods available are exactly the same as they were before because of the unequal rates at which desire falls off for different goods as continuing amounts are used. A prominent druggist or a general merchant carries a vast number of commodities in stock. The range of choice in shaving soap and cosmetics as well as in automobiles and hot-water furnaces has become immense: choosing among many things is a different thing, a "more positive freedom" from choosing among a few. Increasing amount, increasing variety, and invention of new goods contesting the field with old

ones make choice-making always a live responsibility. Yesterday's choosing cannot serve us today.

Distribution of Income.—A levelling of incomes would have a vast effect upon the comparative amounts of different goods demanded. To quote Dr. Kyrk:

If there were no longer any large incomes . . . some commodities purchased today in fairly large quantities by the well-to-do could no longer be sold. Those who had a peculiar need or desire might purchase a few, or there might be an increase in socialized consumption in those commodities beyond the reach of the pocketbooks of individual members of society. But production of perishable high-priced commodities, or those only suitable for individual use would probably dwindle or entirely disappear. . . .¹

Assuming the absence of small incomes, we may well ask, "Who would then buy the cheaper grades of goods? Would the Woolworth stores continue to flourish? Would the demand for the cheaper cuts of meat, for margarine, for storage eggs fall off?"² Economic choices are not merely a matter of wants and goods but depend greatly upon the distribution of purchasing power among the people. "It is possession of purchasing power which gives a positive content to freedom of choice, and which gives the consumer power to 'live out his individuality.' This one economic limitation upon the expression of choices and preferences is so obvious and so keenly felt, that individual freedom in any real sense seems quite formal and negative. Productive energy is utilized to serve the purposes of those who can pay."³

Regularity of Income.—Evenness of income flow also has its bearing on choices. Unheralded prosperity breeds extravagance among all classes. Depression leads to scantiness and waste. Regular income makes it possible for each individual to plan his expenditures and savings.

State Expenditures.—A further factor affecting choosing is the proportion of the national income that is expended by the State rather than by the individual and lesser groups. State expenditures are largely for broad social purposes rather than for the satisfaction of particular persons. Even more directly the State affects economic choices through so-called sumptuary legislation and through discriminatory taxation.

Sales Pressure.—Finally, an influence very different in nature from those mentioned is the stimulation brought to bear upon the consumer from other interested persons. He is not left to base

¹Hazel Kyrk, *A Theory of Consumption* (Boston, 1923), p. 55.

²*Ibid.*

³*Ibid.*, p. 43.

his judgment upon his own sense of want but is actuated by forces from outside to take this or that good. The presence of the advertiser and the salesman is so conspicuous that question has been raised as to whether or not the consumer really makes his choices or has them manufactured for him.

Are Our Choices Rational?—Our assumption is that we are judges of our own actions: that we think. Some have pointed out that much of our buying is done by habit and that very little real mental activity is involved. But what is habitual must at some time have been directly in the focus of consciousness, and somewhere in the past there must have been a real choice made. On the other hand, what may have been most appropriate to meet a need in the past is not necessarily so today. Is it a matter of foods? The buyer may have changed in his digestive capacity or in his organic needs. Is it a matter of clothing? He may have changed in his facial appearance or in his ability to withstand extremes of climate. Or—what is very liable to be the case in this world of changing goods—improved types of goods may have come into the market and opened up the possibility of his answering his want through the purchase of something different with a greater degree of enjoyment and at no greater cost to himself.

It has been argued, furthermore, that we do not really choose at all with respect to much of our buying. We are highly suggestible creatures and buy in line with suggestions offered. We "fall" especially for salesmen and advertisers. We buy what the seller wants us to buy and not on the basis of a decision arrived at through the calculating activities of our own minds. It is pointed out that the quality of our reasoning processes as we confront the representatives of business is utterly inferior to that used in scientific work. We are imposed upon by the minds of others, and to the loss of our own. Having had our interest in some degree captured and our desire aroused, it becomes a matter of having it nourished with carefully selected material. We are fed with "reasons" why we should buy the particular commodity, reasons calculated to make us think we are rational, when in fact we are not. These reasons are only excuses and preventatives against indulging in any critical thoughts. They are excuses both to our own minds and to those of our wives and friends. The technique of salesmanship is loaded with devices to lead the consumer's mind away from any tendency to think freely and fairly. It involves the process of manipulating the consumer into thinking he is master of himself and the whole

situation. It cultivates in him a buoyant emotional state. It appeals in subtle ways to the weakest and least rational parts of his nature. The primary impulses and instincts are played upon. Imagery is aroused in his mind calculated to convey the right feeling tone. His suggestibility is heightened in every possible way, and in this state he is led on to make *his* choice.

The degree to which purchases are made on the basis of suggestion and impulse and not upon rational choice is one that can never be measured quantitatively. In fact the line of division between choice, on the one hand, and acting by suggestion, on the other, is not clearly drawn. Acting by suggestion refers to responding to an influence in a comparatively mechanical or reflex way without calling into action the conscious selective mind, whereas choice is a more elaborate process of mental organization during the course of which we are reflectively aware of the issues and the consequences. Nevertheless the two shade into each other. We are rarely so suggestible that there is not some element of intelligence involved; and we probably never make a choice without suggestion playing a part. The two terms are "a way of indicating the lower and higher stages of a series" rather than two "separable and radically different things."⁴ Any choice a man can make is largely "a synthesis of suggestions" derived from the general life about him. This being so, it is surely folly to assume that rational choice ceases at the point when the advertiser enters on the scene. It may well be argued that what we do "*on impulse*" does not fail entirely to indicate our will, although it must be admitted it is not to be taken as a true expression of it. It falls short through inadequate previsioning of consequences. While, therefore, we should appreciate the importance of recognizing the deficiencies of purchases carried through under these over-stimulated and artificial conditions, we may go too far in assuming that consumers' acts are in no way an expression of their will and personality. It is probably true, moreover, that the individual's judgment is much more in evidence in market relations, and functions in a way more true to the person, than it does when he accepts the standards of living of his group and builds up his set of socially influenced wants in the first instance. With the latter, suggestion is all powerful and choice has no chance to function.

We may conclude, then, that our choices as consumers are, in the main, rational, and on this basis we shall build our science.

⁴C. H. Cooley, *Human Nature and the Social Order* (New York, 1922), p. 52.

Are Our Choices Informed?—Much has been written about the ignorance of the consumer and many are the aspersions cast upon the housewife in particular who so frequently in our haphazard society gets little training for her role as family buyer. Attention has been called to the comparatively low intelligence of a considerable part of our population as revealed by psychological tests. The limited schooling of far greater numbers, utterly disqualify many in our economic system from exercising any leadership in production, yet with our dependence on the monogamous family, we still leave them to give direction in the equally important field of choosing the goods that shall be bought with the family income. Wise expenditure would seem to require a fair knowledge of the laws of health and also of the nature of various foods, clothing, and other goods and services that contribute most to health and development. We read and hear much of vitamins and calories but only now is teaching concerning them starting to make an impression upon the buying habits of working class housewives. Observers remark that they fail to buy food with the most nutritive qualities. They might with equal justification note that the wives of the rich often fill their homes with frippery and articles of bad taste in place of things of lasting value and beauty. Wise consumption predicates that a limited number of persons capable and well-informed in their several fields should choose goods for the rest of us, yet limits are set by family life to a more effective organization of expenditure.

Again there is the problem imposed on us by the great variety of goods of similar nature yet with important differences in quality. We can appreciate and, in some measure, evaluate differences in outward appearance of things, but what of hidden differences? How many can buy clothing and judge in advance the wearing qualities, the permanence of the dyes, and the ability to withstand dry-cleaning or washing without shrinkage? How many can estimate the leather in a wide array of shoes? How many can choose rugs or paints or satisfactory insulating material for their homes? How many know what to buy for a cold or an attack of spring "flu"? Salesmen there are to tell us, of course, and advertising aplenty. But amid all the welter of affirmation and conflicting claims whom is one to believe? As Stuart Chase remarks, the highly advertised article may be comparatively worthless but widely chosen because of the "ballyhoo" raised about it while the manufacturer of a thoroughly honest article who has put his money into the materials and fabrication processes instead of turning it over to an advertising

concern, may be "left flat on his back." The consumer follows the noise.

Controlled Choices: Uses and Misuses of Advertising and Salesmen.—Advertising and use of salesmen have become an important phase of modern production with the first in the ascendant during the present century. They are here to stay for the good and simple reason that they pay, and business is run for profit. American producers were spending in the lively twenties a billion and a half dollars per year on advertising. One page in the *Ladies' Home Journal* is said to cost \$12,500. With some lines of goods, advertising costs are a large fraction of total price. Presumably the consumer, who, in the long run, foots all bills connected with production expenditure, must meet this one. The economist's task is to make a social assessment of advertising rather than to see it through the business man's eyes. What did the consumer get for his money? Was this whole billion and a half clear additional outlay to him? What bearing have advertising and salesmanship upon other aspects of our economy that may compensate the consumer indirectly? In answer we may affirm that all expenditure on advertising does not represent net additional cost to the consumer. The business man through advertising hopes to increase his sales. Increased sales mean increased production and, as we shall find later, goods can usually be manufactured and distributed more cheaply when production is on the large scale. Advertising, likewise, may be directed to achieving more regularity in sales and hence in production, so that men may be kept in steady employment instead of being laid off from time to time. It may be argued that if one firm increases its sales it will likely be at the expense of some other firm, and that the decreasing cost in producing the goods of the one will be offset by the increasing cost of the other; also that the regularizing of employment with the one firm may result in the further demoralization of employment of the second. On balance it is doubtless true, however, that advertising—particularly national advertising, or that covering large areas—has contributed significantly to the growth of large enterprise and probably has reduced the number of firms in the total.

Our interest in advertising, moreover, lies not so much with these quantitative matters of total cost, etc., as with its qualitative effects—its bearing upon our wants and our choices. We have already described how it operates as a creator and definer of wants. It remains to show how it plays its role as a determining factor in

choices. Advertising is a complex phenomenon. It involves newspaper advertising of merchants, theatre managements, commission agents, real estate firms, professional men, churches, transportation companies, and patent medicine people. It involves bill-boards and radio announcements, national and international journals and magazines. Some of it is local in its appeal and some is as wide as civilization, depending on the media used to carry it and on the nature of the product or service. Not differing in essentials, but usually considered separately, are many of the activities of specialized salesmen. In one form or another advertising is insistently with us compelling attention.

A more functional analysis would classify advertising according to its purpose and methods under two main heads, viz. informative and suggestive. The former relies for its results upon education of the consumer with respect to the uses and quality of the product. It appeals for patronage but does so through presentation of significant facts. Types are found in descriptive advertising which seeks honestly to notify the public about new inventions and products, their qualities and their uses, and improvements in products already known. Such also, provided they are honest, are newspaper "ads" of merchants' special sales' offerings and opportunities of the day, notification of price reductions or qualitative changes in manufactured products, and simple statements of realtors, auctioneers, car dealers, churches, etc. In this class would come also some, but not all, advertising by insurance and telephone companies and a smaller fraction of that of motion picture houses. The second type relies upon the consumer's gullibility and upon the powers of suggestion. Facts may be presented, but they are not presented in proportion. Frequently facts of significance are not used at all, and this does not necessarily mean that the product is weak, but that other methods are more effective. Pictures often with no relation to the product take their place, and colour in abundance. The serial picture accompanied by progressive dialogue has recently come into favour with goods such as laundry soaps. More reprehensible than these are the types where there is direct misrepresentation and fraud. Not only are facts neglected but direct mis-statement and lies take their place. Much of this has been indulged in by patent medicine firms who have been able to make and continue fraudulent claims in their effort to build up "good-will" simply because consumer readers have been ignorant and suggestible in a realm so closely associated with their health. The proportion of a newspaper given

to such medicinal advertisements is, in fact, a fair index of the low educational condition of the community in which it circulates. More recently medicine firms, that are obviously over-extravagant in their claims if not deserving the epithet "quack," are prominent as sponsors of radio programmes. In our popular journals and magazines tooth-paste and cosmetic companies are vying with these time-honoured health vendors in the use of misrepresentation, and some of our special brand food concerns are not far behind.⁵ From time to time our National Medical Associations raise a voice in remonstrance and level charges against some outstanding offender, but the great public remains largely gullible, and misrepresentation and gross over-statement go merrily on.⁶

Advertisers have defended this non-factual advertising in various ways: they speak of the art of "graceful" living as contrasted with living by the calculus mentality. There is a spiritual exaltation just in buying—in shopping among the unknowns. What if our oriental rug never saw the handworkers of Ispahan, what of it? Our enjoyment of such things consists in what we think they are. Shopping where everything is known and measured would be no more fun than poker playing with a marked deck.⁷ Others again have pleaded the case for colourful advertising in terms of its indirect compensations. It brightens and cheapens our magazines and newspapers, provides us with radio programmes, etc. Without advertising all these goods and services would cost us much more than they do. The judgment stands, however, that most competitive advertising of identical goods brings no gains whatever to the consumer of these goods and that exaggerated representations generally tend to confuse and lead the buyer away from the most intelligent use of his funds.

⁵See A. Kallet and F. J. Schlink, *100,000,000 Guinea Pigs* (New York, 1933).

⁶Just how the advertiser "pulls the strings" through devices other than presentation of real information is pictured to us by Stuart Chase. He lists ten different "appeals" indicative, he says, of the advertiser's attention to practical psychology. Taken altogether, these represent most of the "springs of human action" in modern society as it is. The following is his list (though not in the order of his presentation):

The fear appeal	Success dope
The beauty appeal	The testimonial racket
The sex appeal	The installment game
The health appeal	The reiterative technique
The snob appeal	The brand and package racket

See "Putting Halitosis on the Map" (*Survey Graphic*, Nov., 1928).

⁷For journalistic statement of this point of view, see, for example, Mark Weissmann *ibid.*

USES OF GOODS

Another phase of consumption has to do with the use of goods after choice has been made and they are in the consumer's possession. This appears to be a realm that economists have entirely neglected, but it is an important part of wealth-using, and it is intimately associated with social welfare. Pathological examples are easily called to mind when it is obvious that wealth is being consumed to no purpose. The immigrant that used the bath-tub as a receptacle for keeping coal is probably an exception, but the housewife that fails to rotate the foods in her pantry in accordance with the requirements of their best dietetic value is not so rare. Our automobiles fail to make good their possible mileage because we are ignorant of how to care for them, or perchance it is accident or neglect. Valuable books lie unread in our free libraries and works of art hang unappreciated in our art galleries and homes because we never turn to them, or, through ignorance, fail to appreciate their meaning. Positively an economic study of this phase of consumption would involve a description and a measuring of the utilities actually derived from wealth as it is used, and, on its practical side, an investigation of the possibilities of increasing the utilities derivable from any given parcel of wealth. This problem brings us back to the family and the direction of its energies (other than those for gain) both within and without the home. An important phase is the management of the household itself and the use made of goods and equipment. The trouble may be due to mere indifference or profligacy or lack of a sense of values. But beyond that the household is too small a unit and its operations too varied to make a continuous and satisfactory use of many things it contains. Moreover, housewives are not all good organizers and managers (nor are their husbands in the directing of their part of the consumption life). Utilization of goods by larger institutionalized groups such as athletic and social clubs present points of strength and weakness.

THE IMPROVEMENT OF CONSUMPTION

Defining the Problem.—The approach to a remedy to the defects in our consumption is not clear. Suppose, for the moment, the consumer may be viewed as healthy-minded and capable of judging his own wants and requirements. He may be looked upon as competent to choose between goods, provided he is equipped with sufficient information about them and given an opportunity to think for him-

self. He may be trusted to make for himself such uses of the goods as will give him the greatest satisfaction. He lacks only information. We might, perhaps, stop with this and see the whole problem in these terms. The main current of western thought in the nineteenth century did so. The consumer's right to choose and to use as he sees fit was set forth by John Stuart Mill as the keystone of liberty. Without such freedom the individual cannot express himself. He becomes enslaved to the will of the state or to whatever organization has usurped his natural right.⁸ Limiting the problem thus, the remedy is plain. Education and still more education! Exact knowledge about the goods to enable us to choose well and to use wisely! The use of standards and of experts, well-equipped and impartial, to provide us with such knowledge!

But another school of thought does not see the defect in such simple terms. Gross appetite, it asserts, prevails too often over frail human reasoning. We debauch ourselves; we do injury to others; in our shortsightedness we elevate immediate satisfactions and fail to achieve maximum enjoyment as measured by any long-time standards. The individual consumer moves in the common consumption pattern of his group and these group patterns are faulty. There is no reason, say Bye and Hewett, "to believe that these standards of living are based on any rational consideration of our real needs. In fact they are often quite the reverse."⁹ Our custom of late night parties destructive of health, the ideal of the slender figure for women artificially induced, the overheating of our homes, are all conventions to which we subscribe. In this contention this school sets itself in opposition to those who teach that there is a process of natural selection going on among our consumption habits and that those which survive do so by virtue of their superiority for a given people in view of the resources of the country, its climate, and the nature of the people themselves.

It is our belief, especially in view of behaviour in relation to fashions, pressure advertising, and the peculiar roads to social prestige in our society, that there is much to be said for the critical view. It is probable that we get on wrong tracks and march for considerable periods to the defeat of our progress and to our partial undoing. Mr. Carr-Saunders cites the effect of alcoholic drinking in England during the first half of the eighteenth century as being so devastating that it appreciably increased the death rate of the country. It took

⁸Cf. H. J. Laski, *The Rise of European Liberalism* (London, 1936).

⁹R. T. Bye and W. H. Hewett, *Applied Economics* (New York, 1928), p. 21.

a moral and religious revolution to lift the nation from this bad habit of consumption. There is no reason to think that liability to error is all in the past. Such terms as "correct" and "ideal" standards of consumption have crept in and become a part of the vernacular in certain fields of economics and imply by way of contrast the existence of wrong and weak standards.

But who is to determine correctness? And by what norms shall perfection be defined? Are some wants and their satisfaction inherently superior to others? Is it a matter of the long-run as against the immediate enjoyment? Is it balance and proportion that is sought or numbers of wants satisfied in the total? The concept "high standard of living" as contrasted with "low standard" usually refers to the number of wants satisfied. We speak of professional people enjoying a higher standard than our working classes. We mean chiefly that their income is such that many of the satisfactions denied to the working class families are a part of their daily experience. Standards are levels measured by income. The term usually has a purely quantitative reference, being concerned with amount and distribution of income. Using standards in the qualitative sense, occasionally we say that certain groups fail to rise in society in spite of their good wages because of their profligate habits and "low" standards. We speak of "high" standards being achieved by means of qualitative selection among expenditures—particularly with reference to choosing between further children and better education, clothing, and cultural trappings for those already in the family.

In the interest of clarity we should do better when referring to qualitative differences to insist on the terms "correct" and "ideal" and their implied opposites "wrong" and "actual." Writers who have assayed this theme have been concerned usually for certain types of benefits and have not attempted the difficult task of developing a barometer of maximum satisfaction that might be applied to the whole realm of consumption. Their concern frequently has been for health and for physical or mental development. One author sees ideal standards in terms of quantities of different foods proportioned properly to suit the fullest requirements for nutrition "in terms of calories, proteins, fats, vitamins, and the like."¹⁰ He speaks of the "minimum amount of food elements necessary to yield a balanced and adequate diet." The ideal for clothing is somewhat broader and is found in "certain standards of health, decency, econo-

¹⁰L. D. Edie, *Economics: Principles and Problems* (New York, 1926), p. 108.

my, display and convenience which can be set up" no matter how much personal whim and fashion may enter in. Other writers have emphasized consumption from the viewpoint of individual efficiency and national prosperity.¹¹ They stress consumption calculated to economize in the use of limited natural resources as well as being concerned about individual and social efficiency. They would suggest oats and corn instead of wheat, pork in place of lamb. Others are apostles for larger expenditures on public education or upon religion or art, as against the claims of what they consider less enduring goods. Still others talk of "organic unity." Finally there are those who plead the case for "graceful living," not meaning by the term social ascendancy through exclusive knowledge of goods as suggested earlier, but graceful in the sense of feeling free to follow a consciously enlightened consumption for its own sake without disciplining ourselves to any further and more ultimate purpose.

Suggestions for Improvement of Consumption: (a) Reconsidering Our Standards.—Improvement in consumption, assuming our national income and its distribution as they are, must take place along two lines, viz., (1) better information concerning goods, and (2) progress in the quality of our wants and especially in our standards of living. With regard to the latter, the first prerequisite for progress in standards of consumption is a general awareness of the problem and, following that, a critical examination of existing standards. The criticism and remaking of human valuations are matters of philosophy. Since our wants and valuations tend to follow the established behaviour patterns, we are caught in a vicious circle of stimulus and response and habit formation and can escape only by deliberate appeal to democratic social judgment. We need surveys as unbiased and objective as possible of "existing concepts of what is desirable and essential," of how present standards came to be and what values are sought in them.¹² Whether our psychology is advanced and settled enough, and whether our philosophy is sufficiently profound to build better than we have done through the less conscious method of the past is doubted by some.¹³ Success also will

¹¹See, for example, T. N. Carver, *Principles of National Economy* (Boston, 1921), chaps. XLIII-XLIV. Also W. C. Waite, *Economics of Consumption* (New York, 1928), chap. xvi.

¹²Cf. Kyrk, *A Theory of Consumption*, pp. 283 ff.

¹³See W. C. Mitchell, *The Backward Art of Spending Money* (New York, 1937), chap. i.

depend upon the impartiality and thoroughly accurate quality of the facts provided by the surveys. Some of the literature at present concerned with protecting consumers, while presenting good material, is so evidently partisan in tone as to set it in the category "propaganda." But granting these various limitations and disclaiming the intention of developing anything rigid, we believe economic satisfaction might be increased for the people through awareness of the problem, study and analysis of present standards, conscious formulation of the ends which are sought and the scheme of life which would carry them into effect. Not the least difficulty with an endeavour of this sort is to make it democratic—participated in by large numbers of people. Its success would involve a great effort in popular education and self-examination. It is possible that one outcome would be the use of a larger proportion of collective, as contrasted with individual, consumption. A concession toward this is already seen in the trend toward state medical care. It is quite conceivable, that the standards as revised might need to be protected for a time in some instances by resort to legislation.

(b) **More Knowledge about Goods in Choosing and Using.**—More knowledge about goods means, of course, more knowledge of the utilities they embody and this calls for knowledge of oneself and one's family, and how different goods answer various needs and requirements. The housewife, be she ever so rational, will be handicapped to the degree that she lacks knowledge of the laws of bodily and mental health and development and general information about where to turn to provide the essential goods for her family. Such requirements very evidently should be a matter of a general scheme of education. Knowing the quality of goods is the greatest problem in consumption and the one which offers the greatest hope of improvement. Betterment would seem to be possible through various agencies which frequently operate together in mutual support such as education, governments, research, standardization, and budgeting.

Government in various ways has tried to assist or protect the consumer. In emergencies it institutes price control and rationing, the latter being intended to assure equal access of all persons to scarce goods. Secondly it legislates pure food and drug laws and employs a large personnel of analysts and inspectors at convenient processing centres to administer them. These have access to any plant or private house where goods are being prepared for consumption and any store or market where they are being retailed. By

means of unannounced sampling, they seek to detect practices in adulteration of foods and use of unlisted preservatives and colouring substances. The bulk of prosecutions on behalf of food, it is said, are entered against manufacturers of meats. Exact and intelligible labelling is another concern of these officers. Products with a distinctive name such as H. P. Sauce, must show on their label a list of ingredients. Use of words like "Pure" and "Genuine" throw a responsibility upon the maker of canned fruit that the article shall contain no ingredient other than fruit and sugar or invert sugar syrup. Consumers of ice-cream are protected to the degree that no product shall contain less than 10 per cent milk-fat, that no other fat may be used, and further, not more than 2 per cent of the weight shall consist of thickeners and stabilizers such as starch, gelatin, etc. Patent medicines must be labelled with the name and address of the maker, statement of exact amount, and a complete list of medicinal ingredients. Protection is thus given in a wide range of foods and drugs against undue exploitation of health for the sake of profit. The approach, it will be noted, is paternalistic and is calculated to minimize adulteration and fraud. It prescribes conditions that must be fulfilled in order that the consumer may not be injured.

The other activities of government for the betterment of consumption may be listed as sumptuary legislation (including use of excise taxes) and the research and educational activities of the Departments of Agriculture and Trade and Commerce. The National Research Council and the Ontario Research Council operate chiefly in the service of producers rather than consumers. Sumptuary legislation is intended to protect people from their own bad habits and vicious tendencies. Censorship of motion pictures and prohibition of the sale of opium are examples of the type. Such laws are usually unpopular among people subscribing to the principles of freedom. Encroachments upon consumers' freedom are more resented than those against freedom of producers, and rightly so. We do, nevertheless, submit to interference when we permit discrimination against certain commodities in the laying of taxes on such items as liquors. In war we go much farther in limiting the complete rights of the individual consumer.

In the main, government has taken steps on the consumers' behalf in a purely physical sense and in a limited section of the field.¹⁴ It aims to protect him against dangerous foods, drugs, and narcotics and it is difficult to see how it can extend protection much farther.

¹⁴Concern for morals is prominent in censorship activities, etc.

Probably it could do something by way of prescribing or limiting the activities of advertisers, by forbidding not only fraud and misrepresentation but also statements from which a reasonable person might be expected to get an untrue impression about the product. It might carry into the field of open advertising something of the same restraints that it imposes on labelling where the labels are attached to the products. The knowledge that advertisements were being examined by inspectors would doubtless cause advertisers to exercise more care. On the other hand, such procedure would probably stimulate ingenuity rather than repentance.

Government is more effective in co-operation with business, seeking to lay down standards in goods, and educating the consumers to protect themselves. In Canada all fruit is preserved according to five grades. Within each grade there is ample variety in flavour, but the firmness of the fruit, amount of liquid in the can, and so on, are uniform for each grade.¹⁵ The technique of standards and grading can be extended to products other than foods, such as clothing, furnishings, cleansers, and a wide range of miscellaneous goods. Business firms and governments have long realized the advantage of buying by specifications and grades determined on the basis of technical testing of the use-conditions desired in commodities. The Bell Telephone Company is reputed to save \$50,000 on lead pencils alone in its annual purchases. Only the individual consumer confronted by the 200,000 items of a big department store essays to make choices without benefit of science. Consumers shop largely according to price; but price apart from knowledge of quality is no guide since producers of many goods are competing through quality while using fixed prices. Producers should not be allowed to undersell the market by reducing the quality of their products. "For such reduction in quality without a frank acknowledgment of it and a corresponding reduction in price, tends to deceive the public and to continue the ruinous opportunity for cut-throat competition among producers."¹⁶ The remedy lies in the general adoption of standards and grades established by expert scientists, and attachments of labels or stamps to remain on goods through the retailing process, and wide popular education concerning

¹⁵Under the Pure Foods and Drug Act above referred to, standards have been worked out for a number of foods. Sometimes they are shaped, however, with respect to a single defect such as "wormy," and too little has been done to educate the consumer as to what is being done.

¹⁶Quoted from a pamphlet by Robert S. Lynd, reprinted from *Advertising and Selling*, Jan. 4, 1934.

their presence and significance. Is there any reason why children's shoes cannot be graded as well as canned fruit? Assuming that the basis of excellence is wearing quality, grade A may be calculated by virtue of quality of leather, stitching, and lining to last a year in daily use on city streets. The label would be a guarantee that their make had withstood machine tests equivalent to one year's daily wear. Similarly, grades B and C would carry the assurance that they would stand tests equal to eight months' and six months' wear respectively. Such grading would not set any limit to style variations and embellishments. One of the chief problems of developing standards is that of selecting qualities the consumer is most concerned about in various goods. Grading and standardizing should be done, however, chiefly with respect to those qualities that the consumer cannot estimate for himself.

An interesting case of consumers' helplessness to cope with deception was presented by the Consumers' Advisory Board of the United States under the N.R.A. in its attempt to get an amendment of the Silk Textile Code concerning the practice of weighting silks with metal. It contended that unweighted silks had greater durability than weighted, and that the durability of weighted silks of varying ages is lessened in proportion to age and weighting when it comes to exposure to light and air, the effects of perspiration, dry cleaning, etc. Yet of fifty silk dresses examined in New York stores ranging in price from \$3 to \$60, only three contained no mineral weighting, while with forty-four dresses more than 50 per cent of the total weight was metal. The Board, in view of the fact that most consumers judged silk largely by its weight and that the saleswomen in the smaller stores knew no better, recommended the establishment of a system of standards, grading, and labelling such as could be readily understood by the consumer, and that the labels should be marked on, or sewn into, every piece of goods sold, and not removed until sold to the ultimate consumer.

Testing laboratories and research on behalf of consumers are not necessarily tests initiated and sponsored only by governments. It has been found profitable for voluntary organizations to operate in the consumers' interest. They publish their findings through regular bulletins issued to members and have furnished facilities for books which have enjoyed a wide reading.¹⁷

¹⁷Best known are Consumers' Union and Consumers' Research, New York. For books see Kallett and Schlink, *100,000,000 Guinea Pigs*; also R. de F. Lamb, *American Chamber of Horrors: The Truth about Food and Drugs* (New York, 1938).

Their comparative success in popularizing their findings raises the question of whether voluntary organizations are not better fitted than government bureaus and departments for carrying these discriminating messages to the people. Government authority, however, is needed for the universal enforcement of standards. Government is needed to initiate and provide financial support for the costly business of testing. Consumers are unorganized and, in spite of well-advertised declarations to the contrary, it is not likely that associations of manufacturers or of merchants will undertake expensive laboratory activities capable of standardizing and grading an entire product. (Exceptions have been certain primary products such as wheat and citrous fruits.) Government effort may be supplemented by voluntary and commercial effort. In popularization of findings and in teaching people how to make the best uses of goods, both private and government agencies are called for. Great possibilities lie in the regular work in the future of high and technical schools and colleges. The formal education of young people as consumers has been all too much neglected. Much of their education has come from reading and discounting the self-interested statements of advertisers. The cartoon of the "flapper," until now at loose ends, but stabilized through matrimony, attempting to buy and utilize her first beefsteak and saucepan has been too true to the tragedy in our education of consumers.

Home Economics in the educational system at both secondary school and college levels is at last finding a place in guiding the consumer in her choice of goods and services. The instruction in how to buy food by grade is rapidly reaching the homemaker and is leading to wiser purchasing. Supported by the Pure Food and Drug Act the Home Economist has probably done her best work here. But education with respect to textiles, clothing, household equipment, and the importance of budgeting income and expenditures is equally stressed. In the field of textiles and clothing considerable research has been carried on in college laboratories and information concerning textile fibres, their care and use has been made available to the public through reports in both scientific and popular publications, through talks over the radio and before women's organizations. Recognizing that the buyer cannot find out the fibre content of goods or know what she is purchasing, and cannot therefore apply her knowledge of how to care for the fabric to preserve its usefulness, home economists have demanded factual labelling of all textiles; but too often without success.

Similarly with clothing and household furnishing; though they are giving instruction on the choice and use of materials they often fail to carry the benefit to the consumer because manufacturers and merchants refuse to co-operate in a standardizing and labelling programme such as is practised by many food processors. Producers of household equipment have been particularly negligent in listening to considered protest of informed women's organizations, but continue to build stoves with low ovens because designers want to streamline the kitchen, and continue to produce irons, ironing-boards and cooking utensils of bad design, poor choice of structural material, and non-adjustable working surface heights in defiance of the prescriptions developed through college laboratory research.¹⁸

Among the several agencies, other than Home Economics departments, offering advice to the bewildered consumer in Canada are the following: Consumer Division, Department of Agriculture; Nutrition Services, Department of National Health and Welfare; Women's Institutes and Extension Departments; the Nutrition Division of the national and provincial Red Cross Society and of the Health League of Canada; Women's magazines such as *Chatelaine*, *Canadian Home Journal*, *Canadian Homes and Gardens*, and *Bulletins* of the Household Finance Corporation which are prepared by trained Home Economists.¹⁹

¹⁸Authors wish to express their debt to Professors Jessie B. Brodie and Edna W. Park of the Home Economics Department, University of Toronto, for assistance with this section.

¹⁹Thus the Maclean-Hunter Publishing Company of Toronto operates the Chatelaine Institute which strikes contact with an influential section of Canadian housewives through the pages of the magazine of that name. Its avowed object is to keep the readers of the *Chatelaine* abreast of progress in the field of production, "to bring to their attention the values and uses of various products on the market, and to guide housekeepers in making a wise choice of equipment and food supplies." It specializes in improving home-making by outlining efficient methods of working and bringing to attention worth-while appliances which further the saving of time, money, and effort. Upon the request of the manufacturer, it tests food products and household appliances to ascertain if they substantiate the claims made for them. Foods are tested as to chemical ingredients, weight, flavour, and menu possibilities. Equipment is tried out from the standpoint of practical use and given engineering tests. Provided the article survives the test, the manufacturer is given permission to use the Institute's seal in connection with its advertising for a space of twelve months and subject thereafter to renewal. Here is a means of reaching a wide public and presenting useful information in non-technical, attractive form. It has, however, its limitations as it has no way of commenting on the weak product. Manufacturers

Budgeting.—Budgeting is significant. It systematizes calculation and calls for a single director of spending for the family, or else a close co-ordination of democratically planned expenditures. It involves keeping expenditures in proportion. So many feet of air-space are to be provided in housing; so many calories in foodstuffs are necessary to physical health; they can be obtained most economically through the use of a definite selection of foods; so much per month is to be allowed for recreation, and so much for mental development. Budgeting implies the acceptance or the setting up of ideal proportions. It calls for a degree of stability and unchangeableness in spending. She who runs true to a budget may not buy impulsively according to momentary whim or according to the machinations of the advertiser. It implies a faith that welfare or happiness is more likely to be achieved through plans based on personal experience or borrowed from the experience of others than through decisions arrived at from hour to hour. Budgeting, however, while assigning

of poor goods will continue to present their wares to the public without appeal to these magazines, and as for applicants who have been unsuccessful, the magazines are practically precluded from giving the public information on the rating received in the performance tests by individual brands.

During World War II in connection with maintaining the ceiling on prices, and in view of the wide-spread charges of deterioration in quality of goods resulting, the Consumers Branch of the Wartime Prices and Trade Board sought to maintain quality through compulsory labelling. As a result during the later war years labelling became rather general with respect to some lines, especially clothing. This, it should be understood, was "identification" rather than "informational" labelling. With the closing out of this Branch in 1946 officers of the National Council of Women took the initiative in setting up a permanent organization of representatives of various nationally organized women's groups, provincial presidents of Women's Institutes, and chairmen of the former Women's Regional Advisory Committees of the aforementioned Consumers' Branch. This new organization, styling itself the Canadian Association of Consumers, soon became embroiled in the drive against rising cost of living which took it into considerations of unwarranted profit-taking, labour costs, unnecessary servicing, etc. It is however slowly laying a basis for activity in pure consumption economics by focussing attention of thousands of women on how to improve consumer choosing and using through ampler knowledge of goods. The outstanding effort during its brief period of existence has been directed toward testing and labelling through use of the new Standards Division of the Department of Trade and Commerce to which the Association submits recommendations of work to be done. From its far-flung membership it seeks expressions of opinion on how "informative" labelling can best be applied to such goods as textiles, bedding, clothing and foods.

The United States Government in the thirties developed a well-considered organization of consumer services.

portions of income to types of goods, usually permits of variations within the types.

SUMMARY

Consumption means the using up of the utilities in goods. It analyses naturally into wants, and the manner of choosing and using goods to satisfy them. Wants have their origin partly in organic nature and partly in social conditioning. Economic wants for different goods are affected by comparative rates of diminishing utility, frequency of recurrence of desire, developing appreciation through use and the effect of the use of other goods. The causes of these phenomena are traceable to various physical, social, and psychological circumstances. Wants are affected by the standard of living. In our treatment, we have considered their expansibility, their controllability by business interests, the possibility of predicting their future, and the possibility of more conscious control through examining our standards of living.

Goods consumed are affected in their proportions by the size of the family income, degree of social classification of the population, the size of the family, etc. Proportions of different types of goods change with time.

The area of choice among goods has increased in some respects and narrowed in others. Industrial technique and power production have increased their amount and variety, and yet have brought about standardization and uniformity. Choice is affected by the distribution and regularity of income, the degree of urbanization of a people, the proportion of government as opposed to individual expenditure, and especially by the activities of producers through advertising and sales policy. Choices we find to be partly rational, partly otherwise, the tendency of modern advertising being to decrease the measure of rationality. Nevertheless, the consumer is largely rational in the making of choices and using of goods. Through present consciousness of the relative claims of different goods and by means of established scales of expenditure built up through his past experience, he reaches intelligently toward the satisfaction of his wants. There are numerous obstacles in the way of our realizing the maximum degree of satisfaction through consumption, but the chief difficulties apart from poor distribution of income are found in our social standards of living and in lack of knowledge about the comparative merits of different goods and ignorance of how to use them. Improvement of consumption, so

far as the economist is concerned, involves, therefore, furnishing the people with fuller information regarding the qualitative merits of goods and instruction in their use, and also—though less promising—a conscious attempt at review of standards. The possibilities of instruction looking to fuller information are great, but performance up to date is weak. Advancement must be characterized by impartiality, scientific method and development of agencies for investigation, communication, and purposeful education.

Improvement of income distribution is considered elsewhere.²⁰

²⁰Chap. xxviii.

CHAPTER VII

PRODUCTION

A. PRODUCTION AS RESULTS

PRODUCTION takes place in answer to consumers' wants that are supported with purchasing power. It is the servant while mankind seeking economic satisfactions is—in a properly functioning social order—the master. It is in the production phases of our order that organization exists, where men and machines are harnessed together in a great co-operative effort. While consumption has remained for the most part individual, and unstudied, production has become socialized and has drawn upon the best of human thought and effort.

The Two Approaches.—We may explain production in terms of the active process itself. When we see a house being built we can readily tell what is going on. Here are men working—bricklayers, plasterers, carpenters, electricians, plumbers—the whole series that we group in the building trades. They work under a boss or contractor. Here also are materials being assembled and associated upon a piece of land called the site. Less conspicuous than these, are other activities, financial transactions, that are necessary to the carrying on of the more visible endeavours. Production consists in the active co-operation of a number of agencies, human and otherwise, in order to obtain profit by uniting resources and wants. It involves control by some guiding mind interested in the result and directing the process to that end. Hereafter we shall elaborate this approach. Economists are interested in the processes of production and whether they are carried on effectually to accomplish good results. They are concerned with the question of whether or not the various agencies and factors, especially those that are limited in quantity by nature, are economized in. They are concerned for the workers for their own sake. They are interested in the changing technology and what it represents in increasing human satisfactions.

We may, however, approach production from a different angle. We may consider it from the standpoint of results. Not what are the agencies or sources is then our chief interest, or the materials

and the persons involved, so much as what is created. Not an analysis and synthesis into factors of production and how they are co-ordinated for purposeful action, but rather the particular results and different types of results which flow from different activities of men and materials. The acid test of all endeavour in the economic sense is, What is produced? Hence we analyse and classify activities in these terms. Also we judge activities as productive or otherwise in the same way. Is a farmer productive? A banker? A boy flying a kite? All are actively engaged; all are using materials or equipment. Yet we assert that the first two are productive while the last is not. The boy is only playing whereas the other two are looking to results other than the pleasure of the activity. Our first inclination is to describe their behaviour by saying they are "making something" while the boy is not. On second thought, however, we are at a loss to describe just what it is the banker is making. Where are the wealth forms to which his effort gives rise? Economists of last century, confronted by this difficulty, drew a distinction between those persons whose energies went directly to the creation of concrete goods and those whose efforts resulted in nothing material. The former they said were producers; the latter were not. This was a fairly satisfactory way of dealing with the matter in a simpler economy. As our system became more and more interdependent, however, involving the use of larger numbers of people contributing intangible services to the functioning productive order, the distinction became less and less real and just. To apply today the epithet of non-productive to people engaged in fire insurance or accounting is obviously to lack sense of proportion about what is vital. We raze such distinctions today by introducing the term "utilities," a concept that is broad enough to include results that are intangible, as well as tangible, some being associated with material goods and some not. Production we define as the creation or the increase of utilities. It creates or builds up what the consumer finds satisfaction in and that which, in enjoying, he destroys.

Types of Utilities.—All behaviour resulting in an increase in positive utilities is productive. A transport company engaged in transporting furniture is productive as well as the manufacturer who fabricates it, for the furniture represents more utilities at the point where the mover sets it down. A cold storage plant is productive because it receives eggs in April and early May when people's desires for them are fairly well answered and makes them available

to consumers from December to March when fresh laid eggs are scarce. All three of these add to the worth of the goods involved. All create utilities. The furniture manufacturer is said to create *form* utilities. He takes the lumber and fashions it into tables and desks and chairs. The transport firm is described as creating *place* utilities. The storage plant is said to create *time* utilities. There are still left, however, many whose labours are useful. It has come to be recognized that the act of exchange itself brings an increase in utilities. The real estate agency that assists in developing a "trade" between two families one of which, living in the city, wishes to go into farming, and the other, now engaged in farming, wishes to live in town, thereby increases the satisfaction of both. Recognition of this, naturally, provided us with a fourth term, viz. *possession* utilities. In our exchange economy, where most economic goods are produced for market, this type has become of vast importance. Again, in view of the use of chemical processes in industry, it is practicable to name a fifth type associated somewhat closely with form utilities yet different. Chemical process suggests change accomplished in the inner nature of the goods wrought on rather than changes in shape and in the position of the various parts. It means the creation of essentially new goods with new properties. It is qualitative in its effects as contrasted with mechanical processes of manufacturing. When coal is turned into petroleum, for instance, the original substance is gone and a new one takes its place. We shall refer to this as *composition* utilities. The chemical formula is changed. The new substance is different from the old. Similar in some sense again, and yet very different are utilities resulting through biological process under man's guidance. He plants seeds in the ground which, thereupon, produce plants and multiply in the harvest. He breeds animals selected carefully for his purposes and they, likewise, multiply in their own kind. This increase may properly be called the creation of *genetic* utilities as the process is one of generation and growth. Finally, we come to those utilities that do not find embodiment at all in material goods but exist by themselves, normally, in close association with the persons providing them. Such are doctors', lawyers', teachers' and entertainers' services—also those of domestic servants, stenographers, and many others. They enter into the productive activities of still others, such as merchants and bankers. These, to be consistent, are called *service* utilities, though some prefer to use the more common term

and say simply "services."¹ Some students, doubtless, will object that this whole characterization is unreal and abstract. The answer is that it only seems so because of our accustomed habits of thought. Utilities are more real in human affairs than the outward forms of the goods that embody them. They are significant data for science. They are more recognized in actual experience than are the ions and molecules of physical science. To get accustomed to thinking in such terms, the reader is urged to examine production of various kinds known to him. What utilities does the corner grocer create? What does the farmer? the policeman? the banker? the advertiser? the speculator? the real estate firm? the insurance company? Obviously, all these play their part in our productive order. Sometimes it will be found that a person or a firm creates only one type of utilities. Such a one would be the speculator who, let us say, buys wheat and holds it off the market hoping that it will rise in price. He is a true specialist creating only time utilities. By his act he assists in making wheat available to consumers when it is worth more than it would be when he buys it. The grocer, on the other hand, will be found to be less of a specialist. In the run of his operations over a period he creates place, time, and possession utilities; in the packaging of his goods he may be said to add form utilities; and through his informational service to his customers he creates service utilities. Much criticism today centres on the middleman. It is pointed out that the farmer, as the "real producer" of milk, receives only a fraction of the price paid by the consumer; that the peaches that the grower has sold for \$25 per ton may be retailed at ten times that amount. Why should our well-known commodities have to pass through the hands of so many persons or companies after they leave the "producer" before they reach the consumer, taking on additions to price at each stage? The answer is they are not completely produced until they reach the final consumer. Form or generation utilities are not the whole of production. Place, time, and service utilities are also the essence of production in our modern society with its population congregated in cities far from the scenes of farm activities, and habituated to have their oranges and fresh carrots at all seasons of the year. Milk must be transported, tested, pasteurized perhaps, bottled, and delivered

¹The recital that we have given of the various types of utilities, it should be recognized, covers utilities created by the productive process only. It is well to remember that some utilities are given to us by nature. We associate them entirely with the term "*land*."

as well as being "produced" on the farm. Collections must also be made from customers and risk taken and bad debts written off. Place, time, and service utilities, in fact, have increased in their proportion of total production during the last quarter-century and it may well be that the end is not yet. Pure form and generation utilities dominated in the days of handicrafts, simple agriculture, and dispersed population, but taken alone they no longer suffice. The philosophy involved in the slogan "Let's abolish the middleman" is based on a lack of understanding of the real nature of production. That is not to say, however, that middlemen may not, sometimes, by virtue of advantageous position or artificial leverages, secure a proportion of the price of a product out of line with their contribution.

Summarizing our remarks on production thus far, we have pointed out the two approaches to a definition. One is concerned with active process and thinks in terms of sources and agencies and the method of their co-operation. The other is by way of results which are found upon examination to be utilities ready for consumption. They are divisible into classes or types quite different in nature, but all of significance to the completeness of products. Both these approaches are vital for economic analysis and explanation. Through the first we are able to examine the actual arrangements of production and learn the principles involved. Through the second we relate production to consumption, and in some rough sense forecast the near future of both. An examination of utilities, moreover, turns our attention and our criticism upon forms of activity that result in none. No production attaches to the activities of the gambler, or the person who speculates without knowledge. There are forms of activity, in fact, whence actual disutility emerges.

Advance in Productive Output.—The purpose of all production being more and better utilities, we naturally welcome every change that promises to speed up their creation. Great gains have come in the 200 years just past through technological advance. Beginning with certain inventions in cotton spinning and weaving in England, and reaching out into iron and steel manufacture and the discovery of the steam engine at the beginning of last century, the advance has gone on and on with an ever-widening base of operations until today the creative capacity of industry as well as the variety in utilities created has increased many times over. Improved forms of business and industrial organization, such as the corporation, the

branch bank, the chain store, and standardized forms of plant organization in manufacturing, have risen to accommodate and put to use the improved technology. Some idea of the rapidity of this increase during the present century is to be had from the index numbers of man-hour volume productivity across the years in various general industries. The following are a few examples, all applying to the United States:²

	1909	1919	1929	1939	1923-25
Manufacturing.	62.3	71.9	124.1	164.2	100
Steam railroads.	75.4	85.4	113.9	149.3	100
Bituminous coal mining.	69.5	85.1	107.2	141.0	100

Even more striking are the gains in some of the newer particular industries while of course those in others, usually the older craft-dependent types, are correspondingly slower. Thus the increase in man-hour output in the rubber tire industry rose 392 per cent in the period 1914-27 and more than doubled in the following eight years. That in petroleum refining measured 300 per cent between 1899 and 1927 (inclusive) and 35 per cent between 1923 and 1933. Primary iron and steel gained 262 per cent between 1899 and 1927 and more than doubled in the period 1919-35. Pulp and paper showed 169 per cent increase 1904-27 but paper showed only 17 per cent 1927-35. The boot and shoe industry on the other hand gained only 24 per cent in the quarter century 1899-1927 but registered almost 40 per cent in the decade 1923-33.³

The rate of advance in physical production is reflected again in the summary figures of national income though here, as already indicated, allowance must be made for changes in the value of the dollar and (as between industries) in individual prices of products.⁴

In Canada during the twenties from 61 per cent to 63 per cent of value produced was in concrete wealth and from 37 to 39 per cent in services provided (including transportation, trade, governmental, professional, repairing, domestic, etc.) whereas in the depth of the depression in 1933 services accounted for 47 per cent of the total. Distributing the total national income to its various sources enables us to get a sense of proportion about the Canadian economy as regards the industrial origins of income. See Table VII.

²See United States Department of Labor, *Monthly Labour Review*, vol. LI, p. 520.

³See *ibid.*, Mar., 1930, and vol. XLIX, p. 1401.

⁴See chap. IV.

TABLE VII
INDUSTRIAL ORIGIN OF THE NATIONAL INCOME OF CANADA
(In millions of dollars)*

Year	Primary Industries	Processing Industries†	Manufacturing	Construction	Retail Trade	Steam Railways	Other Services	Total
1921	1,152	264	959	169	500	274	713	4,031
1925	1,331	278	1,259	202	553	318	1,014	4,055
1929	1,422	349	1,648	387	758	386	1,198	6,148
1933	672	197	921	65	426	181	871	3,333
1939	1,185	312	1,242	184	431	263	1,250	4,867

*The figures here from the Bank of Nova Scotia's *Monthly Review*, Nov., 1935, and June, 1941 are not corrected for income from Canadian investments abroad or interest paid on Canadian debts to foreigners; nor are other allowances made for depreciation, double counting, etc. They differ somewhat therefore, from figures of the Commission on Dominion-Provincial Relations cited on page 95 and also from those of the Department of Trade and Commerce in Tables I and II, chap. IV.

†Includes smelting and refining (excluding iron and steel) saw milling, pulp making, flour milling, slaughtering, and meat packing, etc. The reader will note also the comparatively small shrinkage in service values (except for steam railways) as contrasted with goods and especially the extreme variability of the construction industry.

B. PRODUCTION AS PROCESS: ORDERING OF RESOURCES

Man and His Productive Environment.—In the creation of utilities two influences always operate together. The one is man himself working; the other is the material environment upon which, and by means of which, he works.

With the passage of time both working man and his environment change. His attack upon his environment in the production of goods is very different today from what it was, for instance, in feudal Europe. He calls upon it in new and more effective ways. He finds uses for things, and forces, which in other days meant nothing to him. He has developed a culture which is partly a matter of practical knowledge, skills, and outlook upon the world about him, and partly a matter of created things which have become part of his physical and social environment, and which assist him in present and future economic activity. Such creations (for our purposes), on the material side, are capital goods of all kinds and, on the other, economic organization as found in markets, institutions of credit and risk-taking, and the economic aspects of

government. Culture, of course, is a broad term covering elements other than economic. In his struggle with his problems through the centuries, man has developed as well *political* instruments and processes, *religious*, *artistic*, and *educational* devices and skills to assist him in satisfying his wants in these directions. None of these is without some bearing upon effective productivity, government especially being in a peculiarly close relation. Here, however, we must limit ourselves to matters directly concerned with economic process and conditioning as seen in the utilization of resources, and to the changing nature of man's relation to his environment in the satisfying of wants.

This relationship viewed at any one time is spoken of by the economist as the *state of the arts* at that time. This is an important concept and one whose meaning deepens as one contemplates it. It is, along with man's consumption habits and standards, the measure of his civilization, in so far as this can be measured by any economic yardstick. The number of people in the world, their economic conditioning, and in large degree, their happiness, depend upon it.

This broad distinction between man and environment, however, calls for further elaboration. The material environment upon which man works is distinguishable into several different types of goods, and economic organization is complex and varied. The human forces, in turn, are broadly divisible according to their functioning into two groups, labourers and entrepreneurs or enterprisers.

The Entrepreneur.—This last distinction is in one sense the outstanding characteristic of our economy. The entrepreneur stands out as the central figure. He discovers productive possibilities, estimates the possibilities of making a margin between receipts and costs, and controls the extent of operations, limiting the use of the human and material agencies and consequently the amount of production when this margin becomes insufficient or non-existent, and expanding them when the margin increases. He is the *business man*.

! We do not wish to leave the impression, however, that the whole layout and ordering of production is his to shape in arbitrary fashion. In the last analysis production must follow consumers' demands and must locate its railways and factories with reference to consumers, and to labour and other resources. Nevertheless, granted that these factors are as they are and where they are, the entrepreneur does determine both the objects and the methods of their

utilization. In an economy dedicated as it is to the idea of free enterprise, the entrepreneur is responsible, within the limits suggested, for the placement and condition of men and productive material both within the plant and over the wider realms beyond. Likewise, upon him and the competence of his performance depend in no small measure the amount and character of wealth available for the gratification of human wants.

The farmer directing the ordinary farm operations is an entrepreneur. He selects his livestock, buys his machinery and (in part) his seed, employs his labour, apportions his land; he takes chances with the weather, and studies his market. He operates entirely on his own initiative and looks for his reward not through any pre-arranged payment from any quarter but in the form of excess of receipts over outlay. He works along with his hired man, it is true, and in this sense he is also a labourer and in correct accounting should allow himself a wage as part of his expenditures. The proprietor of a grocery store is, likewise, an entrepreneur even while he is a worker. So is the garageman who operates his own garage. When we come to the more complex forms of organization, the person of the entrepreneur is more difficult to determine. The entrepreneur gives way to entrepreneurship diffused among a whole range of functionaries. In the corporation it seems to centre for some purposes in the stockholders, for other purposes in the board of directors, while for more detailed and minor operations it resides throughout the management. In defining the boundary between entrepreneur and manager, we think of the former as engaged in risk-taking endeavour while the latter, though a hireling, acts for him as leader of operations. We think of ultimate authority vested in the entrepreneur while the manager acts on the strength of a limited delegated authority. The most important choices, furthermore, and the broad general policy of the corporation are not delegated but remain a direct responsibility. The dividing line, however, between the two is not clearly drawn, and the situation differs considerably between the small corporation and the large.

A full explanation of the entrepreneur's function calls for a two-fold approach. First we may view him as a discoverer and promoter of business opportunities—as business organizer. As such he recognizes the needs and desires of people on the one hand and is conscious of the resources through which they may be satisfied on the other. In these two circumstances he sees the possibilities of gain, and takes action to organize the one for the satisfaction of

the other. He finds that resources are owned by people other than himself and manoeuvres to get control of them cheaply. He scents where purchasing power for his product lies and seeks to promote sales. In this connection he may be said in truth to create wants. In producing the goods he initiates ways and means of accomplishing the best results at the lowest cost. He draws upon the different resources through selecting parcels of each in what seems to him to be the best proportion. In the larger enterprises he may have to appeal to other people for credit. In these latter activities he must exercise judgment; in the former he must be possessed of creative imagination and a sense of the market and of costs. As a discoverer of business opportunities he resembles the scientist. As an initiator of action he may be compared to the engineer. But he is different from both. His work calls for courage rather than patience. He needs to be a keen student of human behaviour quite as much as an expert in the properties of things. He must have a sense of values.

The other way of viewing the entrepreneur is as a taker of business risk—as one who ventures his time, his labour, or his capital (or all three) on an enterprise where there is no definite guarantee of return. Production being in anticipation of the demand for his goods, many things may happen to the market during the time necessary to produce them, while costs must be met or responsibility for them accepted in advance. Wars may break out or fashions may change, workers may go on strike in the plant or material may jump in price. Inventions may come in the plants of competitors or the price level of goods in general may fall before his goods come to the market. Any one of these may wipe out his hope of gain and present him with a loss.

In his effort to reduce his chance of loss to a minimum, he resorts to various protective devices. He may produce as small an amount of goods to stock as is feasible in order to guard against excess product or price drop, as the automobile companies have been doing since the 1930 depression; or he may even wait for actual orders as is often the case with house construction. On the other hand, he may transfer certain parts of the risk to specialists such as fire insurance companies, paying them a definite price for a particular service. Milling enterprises likewise resort to the produce exchanges where they protect themselves through hedging. In other words, they "sell short" for future delivery at today's quoted price an amount of grain equal to that which they buy for milling purposes in order that any loss (or gain) in the latter, due to a change in its

price, will be exactly offset. This dealing in "futures" is facilitated by quotations in the daily press of prices as they develop in these organized grain markets through the activities of buyers and sellers, many of whom are pure speculators. Thus on August 4, 1948, the quotations on barley at Winnipeg, which is Canada's leading grain exchange, appeared in the Toronto press as follows:

	<i>Open</i>	<i>High</i>	<i>Low</i>	<i>Close</i>
October	109½	109½	107¾	107¾
December	104¾	104¾	102½	103
May	102½	102½	101	101¾

These figures represent the market's best estimate at different times of day on August 4 of the price at which barley will change hands at this center two, four and nine months from then. Firms wishing to make their gains by milling and not through change in the price of the grain between August and December (say) will buy futures somewhere between \$1.04¾ and \$1.02½ per bushel in the amount they expect to require for milling at the latter date. Should barley rise in price during the fall and exchange at \$1.10 such firms will gain through sale of their futures all that they lose in having to pay \$1.10 for the grain they mill. Such devices as these for transferring risk are, however, particular items applying to uncertainties of peculiar types. They do not cover the whole complex of entrepreneurial risk.⁵

Many economists, with their minds centred on corporate industry, have stressed risk as pertaining entirely to capital investment and have presented entrepreneurship as associated exclusively therewith. The profits of the entrepreneur are the reward of risk-taking. While agreeing that entrepreneurship is always associated with venturing something, it is the authors' opinion that the emphasis may be overdone. It is too largely a financial interpretation. Speaking in relation to our present-day large industry they would say the entrepreneur is quite as much the one who affords to the holder of funds something to risk them on. Without him there would be lethargy and stagnation. Funds would lack investment outlet; labour and resources would lack employment; capital fail to take on its forms. One of the difficulties in time of depression is

⁵It is economically significant that risk is not usually the same after it is transferred. The application of this differs with various types of risk transferred. It may be increased or decreased. Mainly transfer increases the efficiency of total production.

failure of entrepreneurship in this sense. Something has gone wrong with industry as it existed a short time before. For the time being it has lost all profitable objectives. New leads need to be given or new and cheaper methods of carrying through old objectives found to command the service of investment funds and to make stronger appeal to consumers.

How Entrepreneurs Are Chosen.—Considerations of the maximum satisfaction of a people require that scarce resources should be nurtured and conserved and further that they should be used as fully and as efficiently as possible. It is now in order to assert that the latter condition can be attained only in proportion to the competency of our entrepreneurs. In some measure this is true because of their risk-taking function but more particularly because of our dependence upon them as opportunity discoverers and business organizers. To most of us a tourist is only a tourist, but to the Canadian entrepreneur promoting this industry he is a business opportunity. Even while he is a guest that opportunity may be explored and exploited, and that quite in keeping with his good entertainment.

It has often been said "Entrepreneurs are self-appointed, not chosen." So far as our individual enterprises and partnerships are concerned, this is true though it scarcely holds for corporations and government-controlled enterprises where the organizing talent is named by the stockholders in the one case and by the government in the other. Even for individual enterprises, furthermore, while they may be self-appointed it is not generally true, as is sometimes asserted, that entrepreneurs are born rather than conditioned. Children may be born with qualities that promise well for such a way of life, but they must be given opportunities to develop through proper education, etc. In view of the great importance of entrepreneurs to the volume and quality of production and to its selection with relation to consumers' wants, it is most desirable that the best native talent should be utilized in this type of leadership. How, then, do we select our entrepreneurs and prepare them for their work? Theoretically, any man may discover and engage in any line of productive business. One may go into some line of manufacturing or transporting or merchandising whenever he sees fit. But, actually, how likely is he to do so? Has he the mental and the material equipment to carry on in a field where so much is required? Is he conscious of himself as an entrepreneurial prospect?

In our system of free enterprise, while individual organizers are

at liberty to experiment with new methods of production, our society has done little to create opportunities for initiative. More might be done to supplement this negative privilege of freedom "by providing positive facilities at the public expense for research into the processes of production, methods of organization, and openings for trade, and by increasing the educational provision which is the chief aid to equality of opportunity."⁶ Inequality of wealth and the favoured position of sons of those who control industry tend to place in positions of leadership too frequently men of ordinary ability and to prevent abler men from rising. The ideal of equal opportunity shows its strength nowhere more than in this connection. The assumed advantages of freedom here as elsewhere mean little to a society unless people can place themselves in a position to exercise them. If we are to expect wise entrepreneurial leadership, early attention should be given to directing capable youth to an understanding of productive organization as well as to a knowledge of consumers' wants and what may be expected to sell. The need will not be met entirely by a narrow attack on certain productive processes and by an achieving of certain technical disciplines, although some concern with these is important. Entrepreneurs must have knowledge of the broader relationships in our economic organization: the part played by finance, the point of view of labour, the location of purchasing power, the comparative possibilities of different resources (not omitting human experts and services offered by governments), the ebb and flow of business cycles. Such education should encourage also a definite entrepreneurial attitude—a consciousness of responsibility for discovering profitable ways and means of answering human needs. Not only do we need opportunities for initiative in the right hands; we also need attitudes. It is here, perhaps, quite as much as on the informative side that our educational attack has shown weakness. Young people fail to develop the mentality of initiative. At the end of the school course they look to be employed by some firm or somebody. Meanwhile, others of less preparation and often of less natural qualifications are starting the small enterprises which some day will be big ones leading the van. All this represents economic loss.

The Work of Proportioning Productive Resources.—The entrepreneur proportions resources in the productive process. A farmer, for instance, buys a milking machine for his herd of cows. After

⁶Henry Clay, *Economics: An Introduction for the General Reader* (New York, 1926), p. 59.

being used for a few years it gets out of order. Thereupon, taking into account the lower wages of farm labour, he decides to use extra help rather than purchase another machine. Entering into his decision is his knowledge that the first machine failed to get all the milk from the cows and had to be supplemented by a certain amount of hand work. The president of a prepared foods company, acting upon advice of the production manager in one of the company's plants, decides that, with the arrival at a certain production volume per month, it will pay the company to instal a machine for packing the completed boxes in the cases, thus replacing the girls heretofore used. He acts accordingly, thereby incurring interest and depreciation charges in place of the former wage costs. Entrepreneurs are forever making decisions of this kind, acting either directly or through their managerial officers. Through their action the various production plants take on the arrangement and the appearance that we find. Through them the forms of capital goods as well as the number and quality of workers are determined. These entrepreneurial choices embrace the widest variety of objects. In each of the instances cited there was selection as between workers and machinery. Frequently it involves two forms of capital, as, for instance, where a farmer chooses between horses and tractors. Or it may be a matter of different types of labour, i.e. high-priced or low-priced. It may be a decision involving complex results as where a railway company decides upon heavier and more powerful locomotives thereby reducing the number of trains and train crews but calling for strengthening of bridges and replacement of rails.

Principles that Guide Proportioning.—Entrepreneurs are guided in developing their combination of agencies by considerations of the least possible cost and highest possible profit. Determining the best combination is usually no easy matter. A choice between two items in a complex process is not simply a matter of comparing their prices. Often the utilization of one differs from that of the other in its effects on other elements in the process. Sometimes they register different effects upon the product itself. Moreover, there is no definite assurance when the one best combination has been reached. Chemical combinations can take place, it has been pointed out, only in definite proportions of the elements involved. Oxygen and carbon can be combined in the proportion of two molecules to one, and that only, to form carbon dioxide gas. There is no danger of suffering inferior combinations of two and a quarter to one, or two and an eighth, or any other fractional figure. The

chemist knows when he has arrived. But with the entrepreneurial manufacturer or merchant or farmer the case is not so clear. The farmer still gets crops and sells them regardless of whether he uses just the right proportions of this fertilizer and that, the right amount of cultivation per acre of land, the right amount of labour as contrasted with machinery, etc., etc. Moreover, with the prices of these cost goods changing comparatively, what is right today would be wrong tomorrow. How can he know, furthermore, just what the effect of a particular fertilizer will be on future crops? Experts in farm management at the Agricultural Colleges can help him out of their organized experience, it is true. Cost accounting has become a valuable instrument in the hands of entrepreneurs in all major industries. Yet finality simply does not exist.

Proper proportioning being a matter of values and costs, detailed explanation must needs be left for further treatment later.

Finance Capital.—As already stated finance capital is *command over resources—all resources* whether human, tangible, or intangible—necessary to enterprise. It is commonplace knowledge that before anyone can enter business he must have "capital," by which we understand, not particular forms of producers' goods, but authority to order and utilize necessary persons and material agencies. What we are dealing with here is a concept having its basis in property and contract rather than in physical goods. To the degree that the entrepreneur owns in his own right, he has "invested his capital" in the enterprise. To the extent that he looks to others to assist him in financing, there is agreement and entrustment to use their capital for named production purposes. Typically modern enterprise involves at the outset the raising of funds and the establishment of credit necessary for purchasing plant, labour, and materials. Failing this the enterprise cannot start. Later the capital is to be found invested in plant and machinery, goods in process, fuels, patents on inventions, and rights to use certain resources not held in ownership; part of it is still in funds kept "liquid" for payment of wages and other obligations; beyond the actual funds again are "lines of credit" or established borrowing power based on anticipated needs and the estimated earning power of the business. Financial capital thus constitutes a second order of reality in modern production. Its existence is a condition precedent to the increase of most goods. When the development and control of it are poorly handled, production follows wrong leads or perhaps the whole process weakens or runs to feverish exertions. It itself, however, is not

proportioned by the entrepreneur against units of labour and of various capital goods, as these are against one another. Its function is not limited in supporting business undertakings though they constitute its major demand. The manner of its creation takes us to the heart of the story of savings vs. consumption, and interest rates and banking activities. Its advent has given rise to the presence of two classes in society, those who borrow and those who lend, and the fertile co-operation between them. These matters may not be treated at this stage.

CHAPTER VIII

PRODUCTION—(Continued)

LABOUR.—Labour is human effort devoted to production. It involves the use of energy purposefully directed toward a product or a service rather than expended for the pleasure of the action. It may be of hand or of brain. An actor is as truly a labourer as the man that builds the stage. Labour is given under the guidance of entrepreneurship. Mostly in our system it is given for personal gain. The wealth of a nation, according to Adam Smith, depends upon the proportion of its people who are employed at useful work and upon "the skill, dexterity and judgment with which its labour is generally applied." Probably, the emphasis in this statement is not as true as in 1776 when this Scottish economist made his observations upon the emerging factory system of Britain. There are industries in Canada today whose success depends as much upon other features as upon quality of working force. Nevertheless, fundamental truth still resides in this eighteenth century observation. Economic loss accrues to a nation through the idleness of a disproportionate percentage of its people, whatever the reason may be, and likewise it falls short of its productive possibilities if its workers are poorly selected for their tasks or ineffectively grouped and organized for getting maximum results.

Canada's Labour Force.—Canada's population, according to the 1931 census, was 10,376,786. Of these 8,159,059 were ten years of age or over, and 3,927,591 of the latter, or 48.1 per cent, were gainfully occupied or available for gainful employment.¹ That is, they were normally earning money or money equivalent or assisting in the production of marketable goods. Children working at home or women doing housework in their own homes without wages and having no other employment were not included in these figures. Persons unemployed, but employable, were included. The corresponding percentage of gainfully employable in 1921 was 47.5 and that for 1911 was 49.4. Of the male population ten years of age and over, 76.6 per cent were employable, in the sense explained, in 1931, 77.5 per cent in 1921, and 79.5 per cent in 1911. Of females

¹Census of 1941 used fourteen years instead of ten years as starting age for employment. Figures show 48.8 per cent of 8,593,264 fourteen years or over gainfully employed.

ten years and over, the percentages in the corresponding years were 17.1, 15.3, and 14.3. In 1901, it was only 12. These figures include those who were working in ventures of their own as well as those who worked on hire, and cover the independent farmer and the retail store proprietor as well as the farm hand and the clerk. This is not to say that labour includes entrepreneurship but rather that the two functions are very often performed by the same person. The farmer not only discovers opportunities and initiates enterprise; he also labours and so do his grown sons and daughters, paid or unpaid.

That part of population that is under ten years of age, as well as those who have passed the working period of life and those who have, for other reasons, become mentally or physically incapable, are not available for labour. In urban situations the years of non-availability at the beginning of life extend to fifteen or sixteen and relatively early after middle life. In agricultural communities the working span is longer. While population as a matter of course sets absolute limits to working force, the proportion of those available for work is thus affected by the type of economy and by the age composition of the population. Again, the percentage of males who perform gainful work runs from four to five times as high as that of females. The rise of the percentage of females entering employment across the three decades—from 12 to 17 per cent—at the same time that the percentage of males has remained stable or even declined—suggests how social influence is operating. Altogether the percentage of the population gainfully employed in Canada, apart from abnormal conditions of unemployment, seems relatively constant though increasing slowly over a considerable period. The percentage in the United States, a country much more highly industrialized and urbanized, differs little from that of Canada. In 1930, the percentage over ten years of age gainfully employed was 49.5.

All Workers are Not Wage-Earners.—The independent self-employed together with no-pay workers (composed largely of farmers' sons) were in 1941 nearly half as numerous as the total of paid workers (see Table VIII). The term wage-earner is not synonymous with labour nor is it likely that his payment constitutes the only labour problem. That the classes depending on employment by others and remuneration through wage contract are on the increase is nevertheless characteristic of Canada as well as other countries undergoing industrialization. In the United States the increase has been from 48.5 per cent in 1880 to 56.1 in 1910 to 62.2 per cent in 1930. It is an evolution associated with the declining relative importance of agriculture and with the rise of the larger

industry, in manufacturing, transportation, and trade. As an economic fact it is of the first order of importance, marking as it does the increasing interdependence of man on man and the further acceptance of the principle of giving and taking of commands as the condition of mental relationship in the world of production. To give a legal expression to the same thought, it marks the expansion of the use of the contract device to cover a wider range than heretofore. Men sell directly the use of their hands and their minds in increasing measure while other men buy them and order their course.

Distribution of the Labour Force by Industrial Groups.—The industrial distribution of the gainfully occupied in June, 1941, and in November, 1946, fifteen months after the War, is shown in Table VIII.

TABLE VIII
DISTRIBUTION OF WORKING FORCE (EXCLUSIVE OF ARMED SERVICES)
(In thousands)

Industry	June 1, 1941			Percentage of Total of All Groups	Nov. 9, 1946 Total
	Male	Female	Total		
Agriculture.....			1,082	22.6	1,071
Forestry, fishing, trapping.....	144	1	145	3.3	159
Mining, quarrying, oil, salt.....	92	1	93	1.3	64
Manufacturing.....	787	182	970	27.5	1,299
Electric light and power.....	24	2	26		
Construction.....	219	1	220	5.2	244
Transportation and communication.....	247	20	267	7.6	359
Trade.....	352	113	465	15.3	723
Finance, insurance....	61	29	90		
Service (professional, public, repair, business, personal)...	794	461	333	17.2	814
Not stated.....	46	5	41		
Total, all groups...	3,363	833	4,196	100.0	4,733
Wage and salary earners.....	2,117	700	2,817	67.1	
No pay workers.....	278	65	343	8.2	
Self employed and employers.....	967	69	1,036	24.7	

The Changing Nature of Labour.—A skilled labourer is one who has become master of a certain skill and is the result of that division of labour that came in with the handicraft system in medieval town life. A youth served his apprenticeship and thereupon became adept as a printer, a carpenter, a cobbler, or whatever line he had taken up, and spent his working life in that trade. The carpenter not only *knows how* to work in wood, he *can* work in wood. He knows the qualities of his material for *working purposes*. Without being a student of geometry he is the master of geometrical findings, which he has acquired from his teacher and accepted as "rule-of-thumb" information. Labour thus came to include effort of muscle and of brain; and specifically to cover unskilled "pick and shovel" workers, skilled craftsmen, and also the white-collared groups consisting of clerks and professional people.

As physical science began to be looked upon as of practical use, vocational education came in some measure to leave the shop and to be carried on for itself in a separate institution—the vocational or professional school. As a result, a new type of labourer came upon the scene, viz. the engineer. Since then the numbers of skilled workers have receded in comparison with others—notably the unskilled.

The Engineer is he who *by science and by art* so adapts and applies the physical properties of matter and so controls and directs the forces which act through them as to serve the use and convenience of man, and to advance his economic and material welfare. . . .²

The electrical engineer is primarily entrusted with the transformation of mechanical or chemical energy into electric form, and its transmission in that form to the point of use, where it will be again converted into some other shape. The electrical engineer has made his own the question of generating such electrical energy for the solution of the problem of lighting, transportation of passengers by railway, and communication by telegraph and telephone. He touches the physicist in the realm outside his applications of science, and has the mechanical or hydraulic engineer beyond him, where his energy drives the tool, or operates the pump or the elevator. Where his energy is made to appear as high heat, he serves the metallurgist, the chemical engineer; where it appears as low heat or as light, he serves the individual members of the community directly, as he does in the problem of communicating speech.³

Similarly, the mining, chemical, hydraulic, civil, and mechanical engineers have their special fields. Our purpose here, however, is not to distinguish these in all their detail but rather to appreciate *the significant points of difference between the engineer as a worker-type*

²See F. R. Hutton, cited in L. C. Marshall, *Industrial Society* (Chicago, 1930), vol. II, p. 356. Editor's italics.

³*Ibid.*, p. 357.

and the skilled labourer—product of the handicraft system. Labour expressed through the mind of the engineer enters into relationship with the other factors of production in very different fashion from labour expressed in the effort of the hand worker.

Furthermore, the pure scientist himself is a labour type. Improvements in modern technology are due in large measure to specialized scientists and these in turn operate upon the basis of generalizations established by others who have preceded them. Nowhere does the patient effort of the worker have to wait more upon the passage of time and upon the findings of other experimenters before it turns out visible results. Nowhere perhaps does more effort go astray through following wrong leads. Yet in the total these labours contribute to production in the grand way. Long experimentation with the carriage of sound had to precede the radio; long experimentation with bacteria and with chemistry had to precede modern agronomy. The design of the stream-lined car suggests its dependence upon the physicist in his laboratory, while the building engineer making his compilation of the tensile strength of his material or his curved arches continually uses the formulae worked out by the pure mathematician.

The use of the scientist by modern industry is deliberate and conscious. Corporations have their own laboratories for studying, creating, and testing. Men of science are employed and provided with mechanics, assistants, and materials. Operating in the light of the expanding knowledge in their particular fields they seek to make their own contribution at this point or that. The discovery of a material with a new tensile strength or a condition that will lessen revolving resistance is communicated to the engineer or the designer with whom they work in close consultation. Consider, for example, the chemical laboratory of a modern soap works with its constant delving after new processes, new combinations, and new ideas. "What the old-time housekeeper attempted by rule-of-thumb, the factory of today achieves by precise formulae and consecutive testings. The oils are analysed on their arrival. Each has a different organic composition, and it is by combinations of oils, tallows, and fats that the best results are obtained. At every stage of the process, samples are sent to the laboratory, thermal conditions are closely governed and each day's output is rigorously tested."⁴

Scientific research to be significant for production must open ways for producing goods at lower cost. Largely this is by releasing human labour or making human effort more effective, but some-

⁴Samuel S. Fels, *This Changing World* (Boston, 1933), p. 117.

times by improving a machine or substituting a less costly one, or through turning out an improved product through a change in process. Probably, the most significant contribution of science as it affects production has been the substitution of non-human energy for human, (1) through the development of machinery, (2) through the discovery of fuel substances, and, (3) in preparing the way for harnessing water-falls through advance in electrical knowledge. Scarcely less important have been the advances in practical chemistry and bacteriology. Scientific technique as used by larger firms also covers the field of experimenting on persons in relation to productive results as well as on materials, as in the search for the most feasible length of working day, best conditions of environment for the working force to yield the maximum output, most effective division of labour, etc.

Privately endowed organizations devoted to specialized fields of endeavour, as well as governments, carry on research activities. In Canada there are the experimental efforts operated under the National Research Council at Ottawa devoted to study and testing of goods and materials, and the Ontario Research Institute at Toronto. Finally contributing to all the others both by way of personnel and counsel are the science departments of universities. Here the objective is divided and much of the labour has no deliberate connection with industrial production. Indirectly, nevertheless, the bond exists and contributions result other than the education of students. University instructors and research students frequently lend themselves to part-time promotion of commercial projects. The present use of the labour force would be entirely different from what it is were it not for the scientist and organized research. Provided industry can conquer its depressions, it should be reasonable to expect that production will increase with the widening base of information and numbers devoted to research. Attention seems to be turning at the moment to scientific study of workers by calling on the techniques of physiology and psychology.

Analysis of our hired labouring force shows, however, that the great majority are not scientists or engineers but ordinary hand workers well acquainted with heat and sweat and monotonous operations and appreciative of the whistle that marks the end of the working day. In some industries, such as printing, there are many trained skilled workers, but in the total they are relatively much less numerous than fifty years ago. The great majority are unskilled or semi-skilled. Increasing numbers are engaged also in trade and semi-professional services of many types.

Immobility.—The great variety in employment is largely a result of the varied nature of productive organization. We do not have stenographers and bricklayers because a certain proportion of our population tend naturally to perform such labour, but because jobs offer that call for these lines of work and people prepare themselves in numbers sufficient to fill them. Labour, this would suggest, is like a great reservoir from which the water flows without resistance to whatever point it is needed. Industry beckons; it responds. Though not entirely a true picture, this is a view that we need to get of labour playing its part in the smooth functioning of a changing competitive system. The mobile element consists largely of the youthful part of our population and those seeking better work opportunities, but contains also many who have been laid off from former jobs. Organized information about jobs is provided free by the National Employment Service.

Labour does not exist, however, as a fluid or a collection of uniform elements equally capable of responding to industry's varied requirements, but rather in the form of lawyers ready to practise law, carpenters ready to use saw and chisel, and stevedores ready to unload cargoes. Neither of the first named is capable of taking the place of the other or willing to act as a stevedore and the stevedore in turn is not equal to any of their tasks. Largely through circumstances of social environment and training, people find themselves at maturity in different sections of the nation's working force. Instead of a homogeneous reservoir, they present a picture more like that of a vessel divided into watertight compartments containing liquids of varying colours. This tendency of labour to present itself in sections whose members are available for only a limited range of uses in the productive process is variously referred to as specialization, non-competing groups, etc., according to the point of view. The existence of this condition is due indirectly in large measure to the set-up of industry itself. Youth prepares for the work which industry is offering and which it believes industry will pay well for. In a period when engineers are in demand many boys will study engineering. Yet this is not all the story. A lawyer's son is likely to study law, more or less regardless of demand; a shoemaker's son is not likely to study it in any case. A boy may choose medicine or theology for reasons other than economic; and children of low grade academic performance are not likely to be found later in any professional school. Individual preference and fitness, family tradition, and sentiment have to do with the making of choices; natural capa-

city or lack of capacity, together with financial support or lack of it, play their part in implementing or defeating the choices. Human workers commit themselves early to this sectionalism and by the time they are ready for employment they are definitely labelled as fit for a particular line or lines of service, and by the same token unavailable for other lines. This sectional immobility has its bearing upon unemployment and presents difficulties in using all workers at tasks where their specialized knowledge and skills may be turned to account.⁵ Considerations of maximum production suggest also the importance of opening the way educationally and giving direction to various kinds of native ability as it presents itself in the preparatory stages of the worker's life. It also suggests the importance of proper selection of workers by employers at the close of school at the point where they enter industry.

Labour immobility has been presented as unfitness or unwillingness to take up more than a limited range of tasks. It is also a matter of attachment of the worker to a particular place—geographical immobility. Labour attaches to the human creature who performs it. The labourer develops his ties of various kinds to the place in which he lives. Normally, he has family responsibilities that he cannot lightly give over; he may own his home and furniture; he probably has church, lodge, and community associations. All these are the objects of his sentiment. For this reason he is not *free* to leave when the job offers in another place. Furthermore, even when he is ready to sacrifice in these matters, the cost of travelling to the new work may be more than he is able or willing to stake.

Much has been done to overcome this immobility. Special transportation facilities have been placed at his disposal to enable him to cover long distances to and from work. Workers in many instances choose to live in rented houses in order to be "foot-free." Many live clear of community attachment. Others take on no family responsibilities. Yet the great core of this spatial immobility remains, and social considerations may oppose the interests of productive efficiency in carrying any farther leads calculated to increase mobility. Production must order its house in keeping with the human requirements of those who serve it.

A special factor making for labour immobility has operated in the post-war period more effectually than ever before so far as this

⁵A beginning has been made in the attack on this problem in the retraining and transfer activities carried on by personnel departments of progressive firms within their own plants.

continent is concerned. Restrictive immigration laws and administrative practices have been instituted which prevent workers from crossing freely the international boundaries. Positive legislation restrains the flow from other continents into the United States, and in less degree into Canada. Administrative features restrict the free international movement within North America.

Education of Labour.—The productive capacity of a nation's labour force depends not only upon conditions of employment and health but also on the education and attitudes of the working people. Education as a broad term is the accumulated record of one's whole life experience. We refer here, however, for the most part, to the result of our deliberate institutionalized efforts to educate. Our school system, as characterized by its traditional curriculum, elevates the ideal of culture and refinement of life and provides the mind with instruments such as literary and written expression and tools of calculation, that are applicable to many purposes but are not of specialized application. It makes for versatility and breadth of knowledge and interests and helps the student to lay hold of his world at many points. It makes possible a wider use of goods after they are created and a wider use of "productive apparatus." A people without letters could not use the interchangeable parts of our standardized agricultural machinery because they could not read the instructions. It doubtless also increases worker mobility in subtle ways. In the main, however, apart from graduate professional and trade schools, our system has not sought to relate the individual's education to the particular task that he or she is likely to take up as a life work as earlier systems did. More than that, it pays little attention to the labour requirements that our production economy is likely to lay upon great masses of the working population. An educational system devoted to such purposes would need to classify students early, give instruction in many materials, forces, and processes, make provision for practice in, as well as knowledge of, these materials and processes. For some walks of life it would need to stress co-operation with others in work, readiness to take orders and to play narrow monotonous roles. For others, it would stress studies in monetary values, buying and selling, and the art of dealing with people. It is hard to visualize an educational curriculum catering to, and paralleling, the industrial features of our complex economic organization. The generalized nature of our educational process is perhaps a necessary concomitant of the fine division of labour in modern production. No planned allotment

of life and continuous conditioning for the simple tasks of modern production would be feasible.

Nevertheless, many hold that the advent of technical schools and the principle of differentiation in the educational programme for children of different social circumstances and of different mental capacity have been long overdue. They hail with approval the coming of vocational night classes and the introduction of such courses as manual training and agriculture into the curriculum of the public schools. They would extend technical education as we have practised it very successfully for decades in our advanced schools of engineering, medicine, law, etc., much further and would introduce its techniques back into the younger classes and forms.

It is not the province of the economist to pronounce upon educational method and technique in any detail, but viewing man both as producer and consumer he cannot avoid comment on education's results. In the interest of production he can see much to criticize in our recent past attempt to push every boy and girl through the same discipline, as represented by public school and collegiate, regardless of native ability or life's expectation in work. It suggests too little correlation between preparation and task. Economy calls for classification of youth, keeping in mind both talent and life's probable field of activity. On the other hand, he cannot neglect the claims of citizenship necessary to democratic community life, nor yet the claims of culture and enjoyments in consumption.

Organization, Attitudes and Motivation.—One cannot have wide association with workers without becoming aware that their weakness as producers frequently rests more in their attitudes than in their lack of training and technique. From their experience with the job, and in their inability to secure steady employment—possibly also in some measure due to the nature of their education and reading—many have become unenthusiastic, wary, and lacking in the true spirit of co-operation. Some critics attribute this condition to activities of revolutionary propagandists; others blame it to labour unions. But the initial cause is deeper. During these hard years of depression when thousands of men have found our productive order incapable of using and paying for their services; when they have been subjected to the lowered standards and the mental injury associated with relief, they can feel no enthusiasm for the system. They become critical, even hostile. How far such attitudes reside beneath the surface among those who are again at work we do not know. Men working for their wage only, stimulated

merely by the fear of their poorer condition if they fail to hold their jobs, are not the best labourers in the long run. Content and pride and security rather than fear are satisfactory supplements of the pay envelope in holding men at their tasks.

Labour unions have an important influence on labour. They seek to improve the workers' position in bargaining with employers. They may resort to strikes when they feel their members are unjustly dealt with or when they think they can better their condition. They sometimes have also other practices, which, when they resort to them, may undermine and weaken the effectiveness of production. Such are limitations upon the use of machinery, rules setting upper limits upon the day's performance by any member, seniority rules regarding discharge and re-employment, etc. Unions, however, are not largely negative. They stand for fellowship, security, training, and mutual aid. While they challenge the employers at many points, they make for a better distribution of income and probably across the decades their influence has been toward a steadier and more standardized condition of production. Largely they try to lay down long-time advance agreements with employers covering conditions of employment of their members. The unfortunate attitudes that we have been speaking of as residing in the workers' minds would be there, in somewhat different shading, regardless of unions and their organized practices. The various kinds of unions are very different in their degree of co-operativeness with employers in the work of production.

Labour motivation is of vast importance to production. So far as the paid section of a country's working force is concerned, the central motivator is the wage. Hope of its increase, fear of its loss through discharge, or even a sense of decency in desiring to turn in a fair performance in return for it are undoubtedly the forces keeping men in line. The guarantee of competition works in the employer's interest through achieving maximum labour performance, as well as in consumers' and workers' interests. Employers try also bonus-ing, profit-sharing, development of recreation, and other welfare gestures to stimulate goodwill, loyalty, and content. It is a question how much all these and their like have stimulated production. Mostly the worker seems to rest his case on his pay envelope and the size of its content. Mostly he expects to hold his job through an acknowledged standard performance. Fear of dismissal is doubtless an effective driving force in normal times in some cases. Continuing fear of dismissal due to unemployment conditions is not a good labour motivator. To the degree that worker competes with

worker in this situation, it is a cut-throat competition running to abnormal performance and loss of morale. Someone must lose out regardless of how hard he tries. The sense of incompetency on the part of the individual to deal with the situation under such conditions, moreover, preys on the nerves and undermines efficiency. Security of employment along with fair wages and hours is necessary to best labour performance.

Of that third of our working force, the self-employed and no-pay workers, the explanation of attitudes and motivation is simple. Labour is given incidental to entrepreneurship and usually without stint. The farmer or the small retailer, other things being equal, makes gains somewhat in proportion to his work. Some work too hard and work their families too hard for their own and their country's long-time interest. Others give too niggardly of their time and energies and accept a low standard of living.

Altogether, our greatest production losses associated with the labour factor are due not to faulty education or lack of either capacity or training but rather to unemployment and the depletion in strength and vital fibre that results from it. They rise out of attitudes engendered by unemployment or by their experience with what they (the workers) consider inadequate wages and unfair treatment at the hands of some employers.⁶ They are due to maladjustment of worker to task in a rapidly changing world, and especially is this true in depressed periods and in connection with the rise and fall of industries. From the standpoint of production, the labour problem is the effective organization of the working population.

Capital Goods.—Capital is wealth devoted to further production. Some part of it like virgin timber land is purely a gift of nature owing nothing of its utility to human hands. All wealth derives in part from nature, the labour of man entering in or not as the case may be. Economists in the past have seen fit to draw a sharp line between wealth that has been laboured on and that which has not, calling the former *capital* and the other *land*, the two being treated as distinct factors of production. A field that has been cultivated, if ever so little, according to their terminology, thereby becomes capital, whereas before it was *land*. From then on it is to be classed with that great array of goods with which man has mingled his labour. The distinction it seems is not well made. It pays no attention to the more or less of labour that distinguishes different goods. Logically, if it is necessary to differentiate according to

⁶Unemployment and labour relations are treated later.

origins, the line should be drawn to distinguish what *part* is due to nature and what *part* to human labour in *all* goods. This, however, is obviously impossible for natural attributes and qualities enter everywhere in complex ways.

Classification of Capital Forms.—We present now (Tables IX and X) certain classifications of capital goods calculated to acquaint the reader with distinctions significant for economic analysis. The bases upon which the classifications turn are respectively (1) fixity in form, (2) the period of time necessary to yield utilities, (3) relative immobility, and (4) degree of limitation upon increase and decrease of supply. It is not intended that these shall be mutually exclusive. The reader is invited to read downward in each instance to witness the progressive decrease in the quality indicated.

TABLE IX

Basis of classification	Order of goods
A Fixity in form . . .	<ul style="list-style-type: none"> { 1. Fixed capital { 2. Circulating capital
B Time necessary to yield total utilities (investment period) . . .	<ul style="list-style-type: none"> { 1. Land { 2. Railways, factories, and power plants { 3. Orchards { 4. Durable machines, horses, cows { 5. Beef cattle { 6. Farm crops { 7. Factory goods in process, coal, petroleum

The distinction in *A* is clear-cut. It is that long known to economists as dividing *fixed* from *circulating* capital. Railways, factories, milch-cows, etc., yield their utilities day by day in the production of other commodities without changing their own form, whereas wool, wheat, and coal give up their present existence with a single use, the two first to serve as the base for the new commodities in which they may be said to reappear. The important difference from the standpoint of economics between the two groups is that the first are a continuing source of recurrent income to their owners, whereas the second yield no utilities until their final transition into more advanced goods. Distinction may be made too among various forms of fixed capital according to the length of time between successive utility yields. Thus farm lands and some farm machinery make their returns only once a year, whereas the

machinery and plant of a food-products firm are in a continuous state of yield.

The time required for goods to yield their total utilities, the basis of classification in *B*, meaning as it does relative length of investment, is quite as significant as the first distinction. It may be thought that fixed capital forms take a longer period to do this than those of circulating capital, and the one classification might cover both principles. This, however, is not universally true. Brood ewes and laying hens on the farm, for instance, while rating as fixed capital are often no longer lived than a horned animal raised for beef. Moreover, the distinction between fixed and circulating capital fails entirely to bring out the differing durability of the various capital forms that one thinks of within each of the categories *fixed* and *circulating*. It seems better, therefore, to use a separate classification for durability as such and arrange the goods in order on that basis. At the top comes agricultural land and land used for building sites, where the physical duration is infinite provided necessary cultivation and care are forthcoming. Utility yield here may be looked upon as permanent with no allowance necessary for physical depreciation, though there may be, and frequently is, obsolescence. Next come railways and factories where depreciation does enter; then various kinds of machinery and on the farm horses and cows; then the lesser animals, the crops, goods in process in our factories, coal, petroleum, etc. All this is not to say that title to ownership in these goods may not be transferred at any time from person to person: it does mean, however, that the social investment in the more durable forms is more permanent, and the losses sustained when conditions become unfavourable to their use are distributed over a long period.⁷

The third and fourth bases of classification of capital goods (*C* and *D*, Table x) have to do with degree of immobility, i.e. fixity in place and in use. Even though a good may be durable in form, if it can be moved away to more favourable location the case is very different from that where it has to remain where it is. This puts land, factories, roads, and railroads and power sites in a class apart from moveable capital goods. For with energies and resources once committed to the construction of the former, there is an unusual degree of finality involved. It makes investment espe-

⁷It should be observed that an investment in a circulating capital good is in the total more rigid than the same value invested in a fixed capital good of the same longevity.

cially dangerous and loss more irretrievable in case the utility offered ceases to be well received. Likewise the same is true where the *uses* of a capital good are narrowly limited. That form of capital which is capable of yielding only one product is more likely to cause losses than those that are more versatile. The wheat land of Saskatchewan is to be contrasted in this respect with the mixed farm lands of Eastern Canada and the specialized machines with a commodity of varied use such as draft horses or coal. This distinction has been well expressed by the terms *specific* (or single) and *non-specific* (or multiple) use goods.⁸ Versatility in possible uses makes goods less risky for the investor. Socially speaking the distinction is basic to that between rigid and liquid investment.

TABLE X

Basis of classification	Order of goods
C Degree of immobility in space	Agricultural and site land
	Power plants
	Railways and factories
	Bulky and perishable crops; coal
	Iron ore
	Machinery
D Degree of immobility in function	Petroleum and wheat
	Specialized machinery
	Grain elevators
	Building site land
	Factory goods in process
	Farm animals and crops
E Limitation upon increase or decrease through small increments or decrements	Raw materials
	Money
	Immobility through being not readily divisible:
	Railways
	Factories
	Land
F Degree of limitation upon social increase (and decrease)	Wheat
	Land
	Orchards
	Farm horses and cows
	Animal crops
	Manufactured wares

E represents still another type of immobility, interfering as it does with any nicety of control over quantity by the particular

⁸See L. M. Fraser, *Economic Thought and Language* (London, 1937), p. 256.

entrepreneur, of which we shall hear more later. To the farmer, land is often limited by virtue of his farm, already in full use, being surrounded by other holdings. He may not bring additional acres of land to his uses with the same convenience as he can add tons of fertilizer, or horses. He can only attach a whole extra farm which mostly he does not do. Remembering that the whole society's use of a productive good is not different from the sum of the uses made by individuals, we will appreciate the extra limitation set upon the increase of some forms of capital by such property arrangements.

Finally, *F*, distinction is made according to degree of inability to increase the social stock, owing either to absolute scarcity of available resources as with rare minerals and with surface soil in heavily populated countries; or temporary scarcity uncontrollable in nature as with slow-growing fruit orchards and farm animals when we find existing stocks unequal to profit-assuring market demand.

Changes in Capital Goods.—The increase in production during the past century and a half in particular, has been caused very largely by the accumulation and the mounting effectiveness of the myriad forms of capital. The claim has been made, in fact, that the productive capacity and achievement in recent decades have run a close parallel with capital accumulation.⁹ Advance has been associated more with developments in fixed than in circulating capital, and the later machine types especially have meant a vast increase in specific use forms, where frequently the normal condition of income yield is gradual and long drawn out. This means, of course, additional rigidity in investment and losses from obsolescence in a rapidly changing world. The tools, the oxen, the barns, the small mills and factories of a former day were likewise long-lived, but they were in a more solid position with respect to utility yield because of the general appreciation of their functions by the whole business community and consequently their universal demand. Modern chemistry seems to point to greater versatility of resources but does not thereby reduce the problem of older forms of capital running rapidly to obsolescence. The railway and the steamship brought an era of new elements of spatial immobility as exemplified by the great steel plant and the road bed and terminals of the railway itself. On the other hand it, together with the gas-driven lorry of a later period, increased the mobility of lighter forms

⁹Carl Snyder, "The Capital Supply and National Well-being" (*American Economic Review*, vol. XXVI, June, 1936, p. 195).

of fixed and of most circulating capital. The triumph of the machine brought natural power into a position of first importance affecting favourably, first coal, and later electrical power, at the same time as it displaced over much of the production field the domesticated animals. Significant among its influences, next to the great increase it has brought to productive capability, have been its effects on labour. These involve on the negative side displacement and hardship more or less lasting but, more than that, a changed quality in most labour activities. Thought and skill have been transferred to the machine. Labour tends it, invents and repairs it. This has increased as invention has carried us on from relatively simple to the automatic and semi-automatic types of machinery.

Artificial fixed capital plays an ever-increasing part in the productive process. An economy dominated by investment in it is less versatile in the sense of being unable to change the direction of its energies. An economy with no fixed capital (could we imagine it) would have no rigidities save those imposed by the nature of the materials being wrought upon and the various immobilities of labour.

Full Employment of the Factors.—A large real national income is basic to economic welfare. Therefore, the greatest possible volume of production compatible with efficient use of resources is desirable. Failure to reach this goal may be due to, first, lack of co-ordination between the production factors available and secondly, the use of resources in a profligate manner. In either case there is a waste of our productive agents.

Waste of Labour.—The outstanding causes of waste of labour are: unemployment, sickness, uneconomic use, and rapid turnover. Other reasons are: industrial accidents, exploitation of youth, disputes, immobility, and restrictive policies of labour organizations, e.g., setting limits to membership and amount of work each member can perform. Unemployment is the most serious difficulty. But efforts, based on economic research, are being made by employers, labour organizations, and governments to overcome this defect in our economic order. Measures have been taken, and doubtless will be expanded, to mitigate loss resulting from sickness, accident, and labour immobility. The minimizing of waste inherent in labour disputes rests upon the degree of harmony which can be attained between management and labour.

Waste of Capital Goods.¹⁰—Economic loss through waste of capital goods is probably less serious than that arising from waste of labour. Much capital equipment lasts for a considerable period. If it is not utilized now, it can be used later whereas labour effort not put forth today is lost forever. For present purposes capital may be divided into two categories: (1) natural resources, and (2) improved facilities, e.g. buildings, machinery, etc., generally called capital equipment. Natural resources are of two kinds, non-renewable (e.g. minerals) and renewable (e.g. timber). Of this latter group the first class occasions more concern than the second. In view of our obligation to posterity, the reckless exploitation for quick gain of present mineral and similar resources appears to be a highly questionable procedure, particularly when one product is wasted in order to exploit another. For example, natural gas has been allowed to escape so that petroleum could be more easily obtained. So far as renewable resources are concerned, waste also occurs chiefly in inefficient methods of development, e.g. destroying small trees for the purpose of getting lumber from those that are mature. But, in the long run, such resources can be replenished. Waste of machinery and other forms of capital equipment results chiefly from uneconomic use and business depressions.

It is apparent that waste of our productive factors whether labour, natural resources, or capital equipment is in a sense inherent in the competitive system. This does not mean, however, that another type of economic order would eliminate waste. The problem would be present in any form of society.

Responsibility for waste of our productive agents rests essentially with management, labour, and the government. Employer-management's obligation is to achieve greater efficiency and, in some cases, to be less avaricious. Labour organizations should not be unreasonable in their demands. During a strike not only the employer and labour, but society as a whole suffers. The government should assume (in recent times is assuming) responsibility for full employment.

Output vs. Capacity.—How much more our factories, mines, railways, etc., could do if they were operated at full capacity we in Canada do not know. American investigators have estimated for the United States the "productive system as a whole was operating

¹⁰Cf. R. T. Bye and W. H. Hewitt, *Applied Economics* (New York, 1928). chap. III.

at about 80 per cent of capacity in 1929 and slightly less than that if we take the average of the five years 1925-29." In 1932 it was producing only 60 per cent of the product turned out in 1929.

The explanation of this condition of comparative failure is implicit in part in the statement of waste of factors just offered. A more direct and satisfactory explanation, however, derives from inquiring into difficulties inherent in the nature of our economic system as it now stands which prevent it from achieving its full technological possibilities. The best way, perhaps, to give expression to the central point is to say that business and production are two different things. Sometimes in our system as it stands it is good business to block or restrain production. Greater profit is made that way. Certain writers have played up this idea with such telling effect that readers are likely to get the impression that it almost always pays to do so, and consequently there is no possible opportunity for the economist to defend the world of business; that its very mainsprings turn it against the creation of goods for human satisfaction. It may perform a good service at this point, therefore, to set in contrast two extreme views of the productive merits of business.

Production Subordinated to Profit Considerations.—It was the position of the classical school of economists of Great Britain that production and its conditioning might well be left to private business. Adam Smith, spiritual father of the school, taught in his *Wealth of Nations* that as each man pursued his own gain he would be led as "by an invisible hand" to those acts which would result in the good of all. Business folk could not succeed without presenting the market with goods of such kind and quality as would give satisfaction to consumers. The degree of their success was a measure of how well and abundantly they did this. Business gain and social gain went hand in hand. Social production was the essential requisite to good business.¹¹ The beneficent ordering of production as men followed their own self-interest was written in the law of the universe, and interference with the free-play of self-interest resulted only in a lessening of economic satisfaction.

This doctrine, hailed as a great discovery in Smith's time, is now comparatively old. It played a great part in sweeping away restrictions on trade and production, but as free private enterprise became

¹¹Adam Smith admitted exceptions, but this was the main current of his teaching in the book. A complete understanding of his position can be had only through reading also his *Theory of the Moral Sentiments* (London, 1767).

itself the dominant condition it came to be challenged by men of reformist and of revolutionary thought. Sismondi, European economist and historian of the early nineteenth century, emphasized the "frictions" in the working of the capitalist machine; Charles Fourier declaimed against its waste, and a generation later Karl Marx hurled his condemnation against the contradiction existing between production and other phases of the economic process. In complete contrast to Smith, he predicted that, in accordance with natural and inevitable law, production carried on incidental to profit-making must cease and make way for production directed by the workers themselves in the interest of all. More modern critics of the classic position that business profit is a satisfactory guide for production are to be found in Sydney Webb, R. H. Tawney, and various leaders of socialist thought. But perhaps the most complete declaration of belief in the essential opposition between production and business comes from the late Thorstein Veblen, American economist and philosopher. A quotation from him follows:

The business man's place in the economy of nature is to make money, not to produce goods. The production of goods is a mechanical process, incidental to the making of money: whereas the making of money is a pecuniary operation, carried on by bargain and sale, not by mechanical appliances and powers. The business men make use of the mechanical appliances of the industrial system, but they make a pecuniary use of them. And in point of fact the less use a business man can make of the mechanical appliances under his charge, and the smaller product he can contrive to turn out for a given return in terms of price, the better it suits his purpose. The highest achievement in business is the nearest approach to getting something for nothing. The less any given business concern can contrive to give for what it gets, the more profitable its own traffic will be. Business success means "getting the best of the bargain." Sabotage is indispensable to any large success in industrial business. The private gain which the business concerns come in for by this management entails a loss on the rest of the community, and the loss suffered by the rest of the community is necessarily larger than the total gains which these manoeuvres bring to the business concerns.¹²

In Veblen we have, therefore, a complete reversal of Smith.

Which of the two positions are we to accept as correct? Does business succeed by giving a good account of itself in terms of utilities created or does it win through approaching as close as possible to "getting something for nothing"?

We shall do well in looking for the answer, not to expect to throw either claimant out of court, but to seek the truth by analysis

¹²Thorstein Veblen, *The Vested Interests* (New York, 1919), p. 92; quoted in L. D. Edie, *Economics: Principles and Problems* (New York, 1926).

and discrimination. The fact is that under perfect competition, which Smith was assuming, a business man or a firm may try to get something for nothing but in truth he cannot. He must present utilities in the market and they must be not inferior to those presented by his competitors if he is going to do business. In truth the classical position is unassailable provided one accepts the assumption.¹³ We are well aware, however, that conditions of perfect competition are not realized throughout industry. We shall read much hereafter of monopoly and imperfect competition. Under conditions of monopoly it is possible oftentimes to make more profit by limiting production and holding up the price than through producing more and clearing it at a lower price. To the degree that this is true, business unregulated is not a good guide to production. The social interest demands abundant goods and utilities. So long as utilities are possible at less than the social cost of producing them, they should be forthcoming. When we come to study the rules of price determination we shall learn, however, that we must qualify any wholesale condemnation of monopolistic business. For the present, then, we may assert that the answer to our question hinges mainly on whether competition exists or not and the degree to which it is functioning.

We see from the above that production is restricted because, under monopolistic conditions, more money may be made with less output. Good business considers values rather than volume. But such increase in "individual wealth," which is ever the purpose of business, frequently means a loss in potential social wealth. This essential opposition between good business and social interest gives rise to a set of problems that will concern us at length hereafter. They are connected especially with *big* business and in this guise we shall study them in the chapters on the combination movement and efforts at public control of trusts and combines. There is, however, another circumstance in modern capitalism that has led to restriction of production that requires mention. It rises out of the peculiar nature of the corporation which today is the dominant form of business organization. The elaboration of this must also be left for later treatment but here we may assert that it frequently pays directors of corporations, "insiders" who are trading in the securities, to make a poor showing in actual production rather than a good showing. Dr. H. S. Persons, of the Taylor Society,¹⁴ in a paper read

¹³Exceptions to this statement are found in the production of certain goods unfitted by their nature to competitive enterprise such as petroleum mining.

¹⁴This society is concerned with researches in scientific management.

before the American Economic Association in 1933, declared that real leadership in the sense of directing enterprise toward the ideal of maximum output at lowest cost was practically gone from American corporate industry so far as the high command was concerned. The brains of the latter were given rather to manipulation and promotion in the interest of influencing the values in certain equities than to any nice planning and choosing of agencies for effective production.¹⁵ These two sets of abuses, the monopolistic and the corporate, have worked to neutralize in some degree the technical advances which, under better economic organization, were calculated to promote the wealthier economy.

A further group of circumstances associated with our system itself that operate to defeat the full exploitation of productive capacity is associated with the set of phenomena known to economists as the *business cycle*. Here the pace of production is forced to halt from time to time owing to a cumulative inability to market the goods produced. For some reason purchasing power of consumers falls off, or the will to purchase slackens. Plants lie idle and millions of workers are unemployed. This condition obtains for months and sometimes for years before we can get under way again and back, as we say, to the normal.

Other obstacles there are to our attaining to complete use of technical capacity, but the foregoing will suffice to show how much we have still to do before economic organization is sufficient to its task. The classical prescription of complete dependence on competition and self-interest is admittedly inadequate in the modern situation. In different nations today we are witnessing experiments in regulation and hopeful gropings after more effective levers of control. Some idealistic and less patient spirits are calling for general systems of planned economy in order to escape these restraining influences over production, and thereby—so they think—enter into a full exploitation of our technological powers. The only comment we have to offer at this point is the suggestion, which may partake of the nature of a pious platitude, that the rules of the game should be so arranged that as far as possible business success should be the measure of social productiveness.

¹⁵See *American Economic Review*, March supplement, 1934.

CHAPTER IX

THE PHYSICAL ORGANIZATION OF PRODUCTION

SPECIALIZATION AND LARGE-SCALE INDUSTRY

ORDERING within the Plant.—We propose in this chapter to present a picture of the outward aspects of modern production as it has developed under the guidance of entrepreneurs. The organization of the elements of the different factors within the plant involves the area and location of the land; the plan and the location of the building particularly with respect to markets and facilities of transportation; the nature and placement of machinery—part in relation to part, and also in relation to workers. It involves the selection of power resources, and the human arrangements for ordering and controlling, purchasing and selling. Principles that govern plant organization are:

1. To relieve human muscles as far as possible from all lifting and carrying;
2. To make use of the force of gravity;
3. To co-ordinate machines and labour so as to get continuous utilization of the former and maximum service from the latter;
4. To conserve all that is costly at the expense of what is cheaper.

Specialization and Machine Standardization.—The apportionment of tasks among the workers has its bearing upon human values as well as upon the competence of production. It ties in with the story of machine application to industry. In general it may be said that historically it was this division of labour as a great triumph in human organization that ushered in the Industrial Revolution. In his enthusiasm over its possibilities, Adam Smith made it the key-stone of his treatment of production. The whole development of England's industrial life as contrasted with the earlier handicraft organization he saw as emanating from this great discovery. Through it he saw labour multiplied many times over

in its productive strength. The "wealth of nations," he declared, largely depended upon it and how well it was done.¹

The principle of "division of labour" is still fundamental in plant organization, but it varies greatly in its degree of elaborateness. Chief dependence is still upon workers in packing houses, hosiery mills, boot and shoe and glove factories, and the assembling end of automobile plants. A modern feature operating in the service of this type of division of labour is the slowly moving carrier belt or chain which moves the basic goods—animal carcass, chassis of car, or whatever it may be—along to the workers standing each in place to perform his allotted simple operation upon it.

The advantages accruing from this specialization by tasks relate chiefly to increase of product. When a man has a single task to do involving only one or two, or at most only a few, motions, he becomes in time both accurate and speedy in performing them. Anyone who has watched a smart worker in a rubber tire factory laying the diagonally cut strips end to end, or a girl loading box casings on the studs of the box-building machine in a food products factory, will appreciate what experience can do in developing speed and "sleight of hand." Again, the operative wastes no time in passing from one task to another and getting his mind and muscles adjusted. He moves at top notch performance all the time. Furthermore, the analysis of the whole process into a large number of simple parts, leaving it to each man to repeat over and over one or two motions, results in a standardization of processes and enables the work to be taken over by machines. Division of labour has thus paved the way for machinery. The machine is the logical projection of human specialization. One can visualize how it all might have happened from watching the line of successive functions in a corn flakes manufacturing establishment. The box for the flakes, received by the first worker as a piece of card-board, flat though prepared for folding, might be set up by him in the form of a square, bottom uppermost, and one lapel of the bottom folded down; a second worker would apply glue and fold another lapel on it; a third and a fourth would add more glue and seal down the remaining two lapels; a fifth would reverse the box and pull out the folds of the top; a sixth and a seventh would be engaged in inserting the inside lining; others would be responsible for filling, for sealing the lining and the top of the box, weighing and finally

¹See *The Wealth of Nations* (Everyman's ed.), pp. 5 ff. for his excellent illustrations.

packing the boxes in the larger receiving case. These various simple operations having been developed each by each would, through repetition, tend to become standardized and being so would lend themselves to being performed by simple machines. Today, as already indicated, instead of a long line of workers practising their specialized operations, we see only a few girls at points where the tasks have not been taken over by machines. Machines do the folding, daub on the glue, insert the lining, etc., etc. But before this could happen all these necessary motions had to be appreciated, studied, and standardized.

But standardization involves more than mere mechanical reproduction of separate movements. It involves the co-ordination of minute operations in a consistent and progressive series with part fitting part. To understand the full significance of standardization, we need to visualize the regularizing of whole processes which, in turn, has permitted the introduction of more complex and correlated machinery. The trend of this advance in standardization and the introduction of more and more power-driven automatic machinery constituted the second phase of our increasing industrial efficiency, plant division of labour being the first. Along with it has gone the development of standardized parts and standardized materials. Materials are tested and graded and parts made uniform to name or number. The requirements of the machines operating in production (as well as those operating in the service of final consumers) have made this economically feasible. If we know the number of the bolt, or set-screw, or pin for the bearing case, there is no difficulty in finding it ready for purchase and applying it at the point where the old part is broken. A dozen standard Ford sedans could be "knocked down," the parts all shuffled in a heap, and twelve other cars to all appearances the same as the first set up in their place. The more standardized the parts are and the more limited in number, the greater may be the dependence upon automatic machine processes in production and for the most part the greater the advantage to be had from specialized large-scale production. "Repetitive manufacture of interchangeable parts, quantity output of commodities, low cost per unit of product, these are the heart of the process."² This tendency of manufacture to become so largely a matter first of separate creation of different standardized parts and materials and, second, an assembling of these parts into more complex products has resulted in a new divi-

²L. D. Edie, *Economics: Principles and Problems* (New York, 1926), pp. 54-5.

sion of industry and of plants devoted to specialized performance. This is becoming as true of textiles as it is of automobiles and agricultural implements. The possibilities of productive increase seem to depend in considerable degree upon this larger organization and differentiation of the productive process. "The way to manufacture most cheaply," it has been said, "is to establish a separate department for each article and to put it through in continuous repetitive process."

This standardized machine type of production draws upon an increasing amount of fixed capital and natural power and limits the need for manual labour and especially skilled labour. The average amount of capital invested per worker in manufacturing in Canada arose from \$1,420 in 1900 to \$5,080 in 1943; and the horse power used per worker from 2.08 in 1900 to 9. in 1930. In the second place, it makes the worker less of a self-determining agent so far as the work processes and the pace of production are concerned. He is now a machine tender or a placer or adjuster of parts in an assembling process. His pace is set by the requirements of the machine or the rate of speed of the carrier belt. Management has ordered the speed of these in accordance with its ideas of maximum product and a standard of workers' performance. This latter form of standardizing again is not altogether arbitrary, but is based on a study of motions and a "scientific" determination of how many of any one of these a good worker should go through in a minute or an hour or, to take an example from machine tending, how many spindles or looms he should tend at once. The worker, overspecialized in his activities, and suspicious as to how these matters are determined for him, becomes dissatisfied and rebellious. Economic considerations as well as reasons based on social justice and human rights suggest that ways should be found to bring back to him some measure of control over the pace and the conditions of his working life. Up to date too little has been done toward this in industries where standardized processes dominate him most.

Standardization and machine industry set limits on artistic expression of the worker in the goods produced. No opportunity is given for embellishment or variation from type. The machine can never be *arbitrarily* creative. For the same reason they set limits on variety. Modern industry deluges us with multitudes of articles and apparent differences even in products of similar type, but with the latter the differences are often in non-essentials or at best in the least mechanized parts of the article. The great array

of different automobiles on the road is in sharp contrast with the number of differences in motors. Machine-produced variety again, where it is deep seated, is limited largely to prearranged variations in the assembling of the standardized parts. Consider, for instance, the many different shades of worsted for men's clothing where the differences are due to selection of different coloured bobbins for feeding the different shuttles. Once adjusted the shuttle carrying the red yarn will take its regular turn with those carrying the blue and the gray, etc. It cannot place its thread at any other time. Yet there are a vast number of possibilities of colour design in the first arrangement of the turns. Variety is only limited by the algebraic limitation on combinations.

One of the chief limitations upon the further progress of standardization is that the merit of the good as seen by the consumer often consists in its dissimilarity. He wants to see the mark of the artist (or perhaps to enjoy the prestige that goes with consuming the handmade article). In other cases, the demand for variety is so great as to make uneconomic the full utilization of machine processes. A second limitation, and undoubtedly the greatest, lies in the nature of many goods themselves and the conditions under which they must be produced. Agriculture and stock-raising seem to defy standardized productive processing at many points. They are scattered in space. The attack must be varied to accord with weather changes. The essential needs of maturing vegetation vary from week to week. Yet cows can be milked by power machinery, grain can be threshed, hay can be pressed, land can be ploughed, etc. The whole picture is an interesting compromise at present and new advances are being made. Merchandizing is another field where the human operative is still supreme. The commercialized entertainment field is strikingly divided. The cheaper restaurant gives ground to the "automat." As a general proposition it is true that the closer production comes to striking contact with the consumer the more difficult it is to standardize the activities.

The balance in economic gain or loss as a result of all this standardization with its limitations upon variety defies all attempt at measurement. The accounting would take us into an evaluation of the working life of the labourers under alternative systems as well as into a weighing of the claims of volume of goods against goods artistically done, and also the losses that come with the obsolescence of specific use machinery. Most of us would doubtless

vote for things as they are with the important reservation that as much as possible be done to guard against *unnecessary* losses.

The Wider Ordering of Resources by Industry and Locality.—As we advance from the particular plant to consider production in its wider manifestations, we find the various plants and industries located in widely dispersed areas, as well as the performers of self-directed and personal services, but all tied together in a condition of interdependence. Some of this is accomplished through the far-reaching activities of single corporate entrepreneurs as, for instance, where a great chain store organization has its retail branches spread over a continent, its buying agents travelling in distant countries, owns and controls its own warehouses, and even carries on manufacturing activities. Far-flung organization through such centralized control is a relatively late development marking the progress in manufacturing at the close of last century and finding its way into merchandising only in recent decades. By the nature of things, it came to steam transportation much earlier and has characterized banking activities in some countries for many years.

Preceding this method of organization, however, and representing the universal manner of interdependence is organization through the market. Here is the principle which still explains in the main the wider ordering of economic society. One business unit produces a good or a service and sells to another unit. The second unit sells to a third or possibly to the first. At the end of the chain of business transactions and the sequence of productive operations stands the consumer. One needs only to consider the galaxy of independent contributors that co-operate in the making of a motor car or even a ready-made coat to appreciate the immensity of the organization. Operating on the whole set of conditions that have confronted them, entrepreneurs have not only developed the different industries in relation to one another and to consumer wants, but they have placed them geographically at those points and in those areas where they calculate they will bring the most profit.³

³The student should be guarded in accepting this statement without some qualification. Custom, legal difficulties, sentimental considerations connected with the entrepreneur's own birth-place and residence, and lack of means to go to better locations—all these operate against the true entrepreneurial disposition of industry geographically. See Alfred Weber, *Theory of the Location of Industries* (Chicago, 1929).

But what are the considerations that have induced them to locate plants as they have? What is the more fundamental explanation of the present-day localization of industries? The answer seems to run as follows:

1. *Easy access to raw materials.*—One thinks immediately of pulp mills, saw and planing mills, copper smelting, beet sugar refining, and various industries using as their raw material the bulky products of the extractive and genetic industries. The latter themselves are, of course, definitely located by the position of the raw resources upon which they operate. Coal and metal mining, quarrying, fishing, lumbering, oil boring, water power development, and, in some sense, farming, are of this class.

2. *Nearness or access to market.*⁴—Usually it is impossible for an industry to be close to raw materials and close to market at the same time. The entrepreneurial choice will be determined by the comparative ease of transporting the raw materials and finished goods. With bakeries, custom tailoring, millinery, etc., nearness to market, which is here the ultimate consumer, dominates. This is also true, of course—or has been before the radio—of most direct service industries such as barbering, entertaining, doctoring, photography, retailing. It is true of construction. With industries like slaughtering, dairying, and cane sugar refining the balance of gain is not so easy to determine. Slaughtering and dairying appear to be undergoing change since the beginning of this century.⁵ Access to market, it should be observed, is not entirely a matter of distance and weight and bulk. It has to do also with perishability. The development of refrigeration, and especially refrigerator cars, has changed the location of much of the market gardening and the slaughtering industries. No longer does the gardener need to grow his melons close to the consumer, nor do cattle have to travel on foot hundreds of miles to market.

3. *Access to power and heat sources* has been a more potent influence with many industries in affecting choice of location than either of the first two. The grist mill, the cheese factory, and the woollen mill were always found over the stream that afforded them

⁴We have used the word *market* here rather than the word *consumer*. True, the ultimate influences are location of original raw materials and residence of consumers. Several industries may function in series, however, in covering the distance between, and each is concerned directly with what are to it raw materials and what is to it the sales market.

⁵See J. M. Cassels, *A Study of Fluid Milk Prices* (Cambridge, 1937).

power. With the general application of the steam engine, accessibility to coal fields became of first importance, especially in industries requiring great heat as well as power. Coal became a leading, and sometimes a dominant, consideration in the location of smelters and rolling mills in the iron and steel industry, in metallurgical and chemical industries, and in the manufacture of bricks, glass, and pottery. During the post-war period the importance of coal as a basis of power (though probably not of heat) has waned, as the ability to carry electric current generated at water-falls over long distances at low cost has increased. Industries depending on large quantities of power may be expected to spread over wider areas as a result of being freed from dependence on coal fields.

4. *Access to labour supply* affects location of some industries much more than others. In the refining of petroleum or cane sugar it counts for little. In the automobile industry it is by no means dominant. In boot and shoe manufacturing, in textiles, and in clothing it is very important. In general its importance varies directly with the dependence of the industry upon skilled and semi-skilled workers and inversely with the dependence on machinery—particularly automatic machinery. Industry once established, has the faculty of drawing workers to it, and even breeding them in the vicinity. Nevertheless, workers are in some degree immobile, and considerations of the immediate future cause the entrepreneur to bring the industry to them. When we look to the broadest aspect of localization, viz. that on the international plane, the characteristics and skills of the working classes in different nations play a great part. Germany is famous for its chemical and toy industries, Switzerland for watch making, France for its laces, England for its textiles, etc.

Another phase of accessibility to labour supply is associated with organization into unions and freedom from such organization, which, affecting wages and labour docility, has much to do with the choice of location by some firms.

5. *Supporting industries and services* make for concentration. No industry is completely independent. It must depend upon other industries to supply it with machinery or partially fabricated materials or what not. Some industries are much more enmeshed in such dependence than others. The motor car industry in Canada makes no pretence of being self-sufficient but looks to literally hundreds of industries to supply it with "parts." Detroit

being the persistent centre of motor car manufacture since the beginning of the industry has gradually drawn to it automotive parts industries of all descriptions so that the companies engaged in car manufacture have everything needed close at hand. Industries tend to develop in great functioning complexes about a central industry. Not only are such industries supported with necessary materials or parts, but they tend also to become the rallying ground for specialized services catering to them. Special banking services with low interest rates have characterized the cotton clothing industry of New York and New Jersey and the packing industry of Chicago. Buyers from far and wide congregate in large numbers where goods are produced in quantity. For these various reasons entrepreneurs locate within the area of such a complex with the intention of selling their product to some different type of industry already carrying on in the complex.⁶

6. *Climate* is an important consideration with some industries. Aside from geographical specialization in agricultural products—the connection with which is sufficiently evident—it has also had much to do with the continued location of the cotton textile industry, for example, in Lancashire and in Massachusetts. With the introduction of air conditioning devices, climate is likely to be a less influential factor in the future.

7. *Human interferences.*—These include tariffs—raised by nations to make the conditions for certain industries more than naturally favourable—quotas, drawbacks, and subsidies. Wars, inasmuch as they affect entrepreneurial placement and continuance of industry, must also be taken into account. Canadian and American entrepreneurs would have behaved very differently without their respective tariffs during the last century. Australians are venturing into agricultural implement building in competition with the established products of the United States, Great Britain, and Canada, a line of action they would scarcely attempt apart from protection.

Another artificial interference affecting entrepreneurial choosing consists of the special favours handed out by towns and cities to particular entrepreneurs or perhaps to entrepreneurs generally in some industry, if they will open their plants in their precincts. Such offers take the form of free land sites, factory buildings, freedom from taxation for a time, or other advantage.

⁶For portrayal of the nature of great metropolitan centres, see N. S. B. Gras, *An Introduction to Economic History* (New York, 1922), chaps. v and vi.

The reader should appreciate a significant distinction between the first six reasons for the present distribution of industry as listed above, and the last. The former are essentially economic and natural whereas the last is political and directed to the advantage of a particular group. Frequently it is uneconomic in its results. Not deserving of the qualification *political* but scarcely economic in the true sense, have been the influence on the location of other industries of the discriminatory price and rate policies by railways and industrial trusts.⁷

8. *The continuity and immobility of industries* once they are located is important. Very often one can see no reason why an industry should be located where it is. Nearness to materials, to market, to source of power—none of these marks the place as especially favoured. Labour conditions are not unusual; it enjoys no artificial favours; it depends in no significant way upon any supporting products or services. And yet there it stands, and bears every evidence of continuing even though an evaluation of the whole situation would suggest it might be better elsewhere. Assuming entrepreneurial competence in the past, the place must have offered advantages of some kind at an earlier period under a different condition of the arts. Yet comparison must not embrace too wide a geographical area when we refer it back into the past. Before the advance of transportation, the area of entrepreneurial choice was comparatively limited. The enterpriser did not look over a continent, as the General Motors Corporation has done recently, and decide upon New Jersey or California as the best site for a divisional plant. Rather, he made his choice among a few small towns or within the limits of his county. Other entrepreneurs in the same industry established themselves in other counties. In the course of time, bankruptcy, death, possibly amalgamation, have played their part. In the long run superior position, superior management, or both, and in some cases probably an element of sheer chance, have brought about localization on the larger plane as it confronts the observer today.

The reader will do well to apply the material of these paragraphs by asking himself, and carrying the question to others likely to be better informed, why various plants and industries of the country are situated where they are.⁸

⁷See W. T. Jackman, *Economic Principles of Transportation* (Toronto, 1935).

⁸There is also a specialization of industry by *stages*. It concerns the various steps in the productive process and has tended to develop separate business

Specialization by Trades.—Specialization by trades refers to the classification of workers into carpenters, masons, printers, lawyers, doctors, cobblers, etc. This represents a very old separation of responsibilities among producers and was much more inclusive and far-reaching before the Industrial Revolution. It covers now only a fraction of industrial workers, being confined mostly to the construction industry, printing, clothing, repairing and maintenance, and (in a new guise) stenography and kindred services. On another front it has expanded in the present century with the increase in bond salesmen, insurance men, speculators, money lenders, etc. In contrast with the division of labour in which the worker is confined to some minute task within a given factory, each worker carries out the whole of one productive process or function. It brings us to the skilled worker and the professional man. Its existence has hinged upon the larger organization of society rather than upon organization within the plant, since it is based upon the idea of each selling his own product or his professional service in the market. In the large plants of today, however, some skilled tradesmen are employed in a united attack upon a single project, but no longer as entrepreneurs (masters) in their own right. No longer is the product of the individual craftsman so employed the basis of market transactions. Except in repair service and in tailoring and the professions, the same is true elsewhere. Workers' organization into trade unions has largely followed this basis of division and selection on this continent. The failure of the unions to develop satisfactory organization of the steel, the automobile, and the packing industries, 1900-30, is indicative of the unreality there of these lines of division in a large part of the working force. The recent rise of a rival organization is symptomatic of this lack of recognition of the real situation with respect to labour types in such plants.

Bases of Advantage Through Trade.—The make-up of the larger economic society implies dependence upon the market. It exists by and through trade. The localization of industry as well as specialization by trades involves trading between the parts. Consumers having somewhat the same wants everywhere requires

units at the various stages. In the production of steel goods, for instance, there are the mining of the ore, the primary processes connected with smelting and refining and the secondary processes associated with the making of wire tubes, nails, etc. More recently there has developed a tendency to bring the stages together under a single business leadership.

that exchanges must take place between specialized districts. Through such specialization, and trade in the products, a larger total production is possible to society than through each part producing all its own products. And not only is this true for the whole trading society, but the wealth of each trading district is also increased. Let us assume, for example, that Ontario is better fitted for manufacturing motor cars than Saskatchewan, and that Saskatchewan has the advantage in growing wheat. To be concrete, suppose that \$5,000 expenditure in Ontario is capable of producing six cars or five thousand bushels and \$5,000 expenditure in Saskatchewan will produce five cars or six thousand bushels. If each operates independently without trade it will have products as above. If they co-operate through specialization and trade with each other, assuming equal trading strength, each will have six cars and six thousand bushels of wheat.

Furthermore, in the trading relations of the districts, it is not necessary that one should have absolute advantage in one product and absolute disadvantage in another before they should take to specialization and trade. To speak concretely again, it is not necessary that Ontario should be able to produce motor cars more cheaply than Saskatchewan and that the latter should produce wheat more cheaply than Ontario. If we assume Ontario could produce both cars and wheat more cheaply than Saskatchewan, it would still pay for her to produce cars and leave Saskatchewan to grow wheat provided she had a greater advantage in car production than she had in wheat growing.⁹

These two types of beneficial trading conditions based on specialization have been referred to as involving respectively the principles of "absolute" and of "comparative" advantage. Some writers seeking a more descriptive terminology have called the latter "comparative differential" advantage.

Both absolute and comparative advantage apply to division of labour by trades. Practically all the trading of an earlier day—as contrasted with "foreign" trade—was of the former type. The cobbler specialized in shoes, the weaver in cloth, and they traded each for each. Today, comparative advantage is also significant although the absolute type is undoubtedly more common. Examples of the comparative type are probably confined chiefly to cases where a competent individual has become master of more

⁹This assumes, of course, obstacles to the free passage of Saskatchewan's population to Ontario.

than one craft or profession. A dentist may in his youth have learned blacksmithing and today, though potentially more proficient than the man in the local smithy, nevertheless, employs the latter to shoe his riding horse while he uses his own time at his chosen work.

The Limits and Costs of Specialization.—Specialization of all types is limited by the nature of the industry and the size of the market. It can achieve full economies only where markets are large enough to take the whole product of the producing unit. The optimum condition of specialization in a manufacturing plant, considering the manufacturing only, is a fairly definite matter varying with the nature of the industry and ties in closely with the idea of the best sized plant. This optimum plant condition is not, however, the only determining factor in deciding what is actually the right size and consequently the right amount of specialization in terms of the whole situation. The cost of transportation both in bringing raw materials to the plant and in distributing the finished product over greater distances must be weighed against the gains of plant specialization. Small enterprise in such cases is not to be condemned where it continues its course with comparatively little specialization provided it is paying wages equal with larger firms. (Economic loss is plainly involved, however, where an industry capable of great gains through specialization continues to operate through a plurality of small firms in the same market area protected by a tariff.) In general it may be said that specialization associates best with densely settled areas of large purchasing power and is limited by wide scattering of population, especially where bulky commodities are involved. The firms engaged in making motor trucks in Canada have only compromised with the carrier line with its studied sequence of labour operations. The heavy industries of Canada, in fact, are generally handicapped by inability to enter into the full advantages of plant specialization and to use the machinery most economical for plant operation. Likewise specialization by trades is limited by sparseness of population. While the doctor, teacher, merchant, and garageman are found in the village, they operate in a small way; the preacher divides his energy among two or three parishes; the lawyer and the professional entertainer are absent; and even the more advanced aspects of educational, medical, and retail services are missing. Though improved roads have affected the situation favourably, professional specialization

depends upon numbers, and social gains emanating from both quality and economy of service associate with density of population.

Geographical specialization has been unduly restrained, viewed from the purely economic angle, by national and sentimental considerations. The pattern of the world layout of industry is not sketched in the single large design that would obtain if political interferences had not broken it up. As it is, the various nations have, through their policies, in some degree developed their own individual localization patterns. One thinks here not only of tariffs, but of interferences with the export of power, and political considerations in the lay-out of railway lines, etc. Ambitious cities and towns have also hampered the natural economic distribution.

Specialization, especially of the types that operate across the market, must be debited with a social cost in that it places people in such a condition of interdependence. Failure to perform by any part affects not only the well-being of consumers but the functioning of other productive parts. The greatest productive problem of our times is to keep the whole organism functioning.

Specialization by areas often involves a particular loss in the human factor. Singleness of industry in an area means specialization without sufficient alternatives. Such specialization means a stilted use of the varied types of natural capacity in a community—especially where the industry involved has a narrow range of job offerings. Escape from this is accomplished in part, sometimes, by developing a second industry complementing the first in this respect.¹⁰

Large-scale Production and Integration.—The development of large-scale production over a large part of our productive order has run parallel with improvements in transportation and communication, the widening of markets, inventions for the better control of nature's power, and new methods of gathering capital in large quantities into centralized hands. Without any one of these it could never have taken the strides it has. And conversely, without it, all the others would have been in greater or less degree lacking in purpose. The large-scale movement has not advanced at the same rate over the whole area of industry. Its greatest progress in the nineteenth century was in manufacturing, steam transportation, and metal mining. In the twentieth, in addition to these, it has made gains in merchandising, banking, power development, and commercial entertainment. A glance at the

¹⁰For social costs of specialization by tasks, see *supra*, p. 131.

situation in Canada with respect to railways, banks, power companies, nickel and gold mines, manufacturing of automobiles and agricultural implements, sugar refining, cotton spinning and weaving will indicate its significance. In agriculture, on the other hand, in the professions and repair services, as well as in some areas of retailing and manufacturing, small-scale production still predominates.

For better understanding we should distinguish between two separable developments, viz. increasing size of individual plants and increasing size of business units. A manufacturing firm may grow either by building additions to its factory and installing more powerful machinery or by building a number of factories in different parts of the country. Or, it may expand through buying up the plants of other firms that are already going concerns. In considering the advantages of large-scale production, it will be evident that the economies involved sometimes refer to the large individual plant, in others to the large business unit. Inasmuch as the latter is the more significant feature from the standpoint of public policy as well as from that of private ownership and entrepreneurial control, we shall carry the whole examination under that caption.

Before proceeding to this, however, it is well to make some further distinctions showing how the process of building larger business units has gone on. One way has been simply through the increase in the size of the plant and its operations. This we may call *simple expansion*. A second, has been through opening other plants or branches similar in type to the parent plant and is called *horizontal expansion*. We see good examples of it in our branch banks and chain stores. A third has been where a strong company has bought up and taken over other plants with operations similar to its own; or, perhaps, two or more companies producing the same commodity and heretofore in competition have arranged among them to pool their resources in a new company. These results we shall refer to as *horizontal combination*. A special variant of this last is very practicable where it is desired to combine for certain purposes while remaining separate in others, as where grocers unite to buy their products while facing the public as individual firms. A fourth has come about through a firm engaged in merchandising, let us say, deciding that it could make more money by manufacturing part of the commodities that it sells. Or, perhaps, a firm engaged in the primary processes of manufacture decides to extend its operations into the secondary phases, as where

a steel company begins to produce wire, nails, etc. Or again it may reach back into the production of its own raw materials as where the same steel company decides to operate its own coal mines and get control of the railway lines necessary to the transportation of the coal. This development has become very common and, carried to its logical conclusions, may result in having the whole series of processes, from the production of raw materials to the sale of goods to the final consumer, all directed and controlled by one firm. The link-up usually has not yet proceeded so far in an open and forward way at least, though a central mind may exercise elements of control throughout the whole range of steps. This expansion through projection backwards or forwards is spoken of as *integration*. When accomplished through the taking over of other concerns rather than through extension of the company's own operations, it is frequently referred to as *vertical combination*. Finally, there is the type where growth takes place through engaging in activities quite different from those of its original interest. A meat packing company may engage in the canning and handling of vegetable products to make a better use of its refrigeration plant or to give a fuller line of offerings for its salesmen, or a coal merchant may go into the ice business in order to give occupation to men and equipment during the summer months. This is known as *lateral combination or expansion*.

Production Advantages of Large Business Units.—The immediate reason for business units assuming the proportions that they do through purchase, combination, clever manipulation of significant voting stock, as well as by virtue of actual growth in plant output, is the expectation of bigger profits for the owners. There are instances, unfortunately too numerous, when the development of these larger-scale units is not in keeping with advance in productive effectiveness. They represent gain, or hope of it, in private wealth but loss in social wealth. For the present, however, we are concerned only with matters making for more effective output for the firm, i.e. more value at less cost, which, at the same time, is not inconsistent with the principle of more economic social production.

1. The first advantage of the large unit is the fuller development of division of labour in the plant and hence the more effective use of men. Tying in with this is the advantage of bringing in more and bigger machinery and drawing upon more natural power. For the most part large machines operate more cheaply than smaller

ones of the same kind in terms alike of cost of power, labour service needed to attend them, and depreciation in the machines themselves.

2. A second advantage also concerns division of labour but lies in the specialization among the executives of the firm and in the departmentalizing of their staffs. Thus separate departments are set up for production, purchasing, sales, accounting, and personnel, with leading officials of the company assuming responsibility for each.

3. A third advantage consists in the fuller use of able men, of experts and processes. A man of exceptional talent may be using up his energies in holding board meetings and making decisions for a small business when he might be directing the destinies of an enterprise a hundred times as large with no greater strain upon himself. When a number of small enterprises are thrown into one, such a man's abilities will tend to place him in the leading role, the heads of the other small firms being reduced to secondary positions. The finer imagination and entrepreneurial talent will thus be available for the direction of vastly increased amounts of labour and resources and the whole will be used with more energy and to greater purpose. Similar in nature to this is the more frequent employment and the fuller use of experts. Promising young men are given special training by some great companies, especially in enterprises characterized by horizontal expansion or combination with their standardized layout at a large number of plants. We see this in the chain store with its men specialized in selecting locations for new stores, or in instructing in shelf layout, and banks where the inspector moves unannounced from branch to branch reporting only to head office. But specially trained men are not confined to enterprises of this type. One rubber tire company in Canada, operating a single plant, prides itself on its practical "university," the graduates of which are prepared to proceed to any part of the works to fill a temporary gap or lend a hand or give instruction to a newcomer. The cost of maintaining such a school for "general experts" could scarcely be sustained by a smaller company. Not less important sometimes than the full use of the man is the wider application of new discoveries in methods or in processes.

4. Economies associated with buying and selling favour the large firm. The great merchant firms and mail order houses are said to have enjoyed an advantage in buying which in some places

has been so great as to be anti-social.¹¹ But apart from such indictments, there are real and legitimate economies in the discounts offered to large buyers. The sales costs for the firms catering to them are lessened. Furthermore, if these firms have assurance of such orders in advance, they can go ahead with their own application of standardized processes and devices possible only in the large-scale output of volume product. Big buyers again can make a fuller use of the time of purchasing agents. They can afford to test the qualities of goods or to employ the services of research agencies who specialize in this. Among other items that firms must buy are the services of labour. Some economists have stressed the great advantage of large firms in this connection. Probably this is true in the sense that whole industries that are dominated by big business units have successfully defied trade union organization and for that reason have remained low wage industries. On the other hand, within the boundaries of the industry one finds the small firms frequently running to lower wages than the large ones. Unequal strength while it may favour the large organization of industry, is not likely to be in the interest of the whole economy. Other special items that large firms can often obtain more cheaply are railway transportation service, and funds both for the purchase of plant and for current operations. On the selling side, the large firms are equally fortunate. Their salesmen can be expected often to receive larger orders than small firms could fill. If size is based on plurality of products, salesmen can carry more lines. Advertising space can be used to better advantage and the whole campaign developed on more ambitious lines. In some cases they can employ magazines and journals of national circulation and sponsor radio programmes with a wide hook-up. With certain enterprises such as mail order houses the first cost of advertising is so great as to preclude all except large firms from entering the field.

5. By means of integration, buying and selling costs at different stages of production are avoided, steady and dependable supplies of materials assured, and in other respects the fuller co-ordination of stages achieved. Through plurality of plants specialization among them can be developed. Great gains of this type have been achieved in the post-war period in the textile industry on

¹¹See *Report of the Royal Commission on Price Spreads* (Ottawa, 1935), pp. 204 ff.

this continent and in the largest of the agricultural implements firms.

6. The large company has all the advantage in the utilization of by-products or side lines incidental to the main activities of the business. By-products are based on materials which are too insignificant in small enterprises to be capable of economic utilization and consequently go to waste. Their capture through the efficacy of the larger-scale organization is both social and private gain. Classic examples of by-products developed as a result of the larger-scale business are those coming from the packing houses such as glue, buttons, soap, combs, fertilizer, and adrenalin used by the medical profession.

7. Where there are opportunities of turning minor discoveries to considerable advantage, it is economically feasible to carry on research. Most readers will have heard of the chemical research of the great packing houses and pulp and celanese firms, and the advance experimentation with materials and with possible structural devices for next year's models by the automobile companies. Branch companies in Canada look largely to parent firms in the United States to carry forward this progressive work, yet contribute their ideas and their support. The effort must be viewed most favourably by the social economist.

Spread of Fixed Costs.—What is in most cases the most important advantage of all in large-scale production and tends, in fact, to incorporate the content of the others is the spread of what are called fixed costs over a larger number of units of product. An automobile firm requires expensive dies for stamping the fenders of a particular model of car. Next year's styles will change so that this year's dies will be no longer of any use. If the company sells 5,000 cars of this model the cost of the dies must be charged in their price. If it sells 50,000 the same cost is distributed ten times as wide. The gains of large-scale production are connected not only with the size of machinery and other forms of fixed capital but with the full exploitation of these through continuous use. This principle is of wide application. We see it in the printing of books. It applies to the continuous and full use of the land on which factories stand or the road-bed over which trains run, the complete use of office force and executives, and of all items whose costs are relatively constant for the firm whether much business or little is done. Expressed in general terms the total of the costs of business enterprise are divided into fixed or overhead costs on the

one hand and variable or operating costs on the other. When the plant is once built, the interest on investment constitutes a fixed annual charge thereafter regardless of the volume and value of the output; as does the fixed tax upon the property, the fixed charge for fire insurance, the relatively fixed salaries for chief executives, and at least a fixed minimum for office staff. These totalled together represent a fixed charge on the business. Some elements would go on even if it shut down operations entirely. Fixed costs are those which go on more or less uniformly regardless of the volume of business. Variable costs on the other hand are those whose size vary more nearly in accordance with the volume of operations. They centre in the charges for raw materials and labour services connected directly with production processes. They are associated also, however, with repairing of machines, depreciation due to larger use, current interest obligations, some forms of taxes, insurance on inventory, and other features. Sometimes they are referred to as direct costs or as prime costs. Other things being equal the greater the ratio of fixed to variable costs the greater will be the tendency to increase operations to make fuller use of these fixed elements. The principle is most evident in application to railways and lines of manufacturing involving the use of expensive plant and equipment. It is less evident in merchandising and the service industries. A railway company must keep up its track and terminals and pay the interest charges on the whole whether it runs twenty trains over its lines in a day or one train. It must purchase and maintain locomotives and train crews whether they are operating a full complement of cars or not, or whether the cars are crowded with passengers or freight for the whole journey or only partially filled.

The advantages of large-scale operation arising from the fixed cost factor refer usually more to the big business unit than to the large plant. The gain is associated with continuity of use of expensive fixed capital and land and executive capacity rather than with mere plant size. The main desideratum of industries where fixed cost features so largely in determining size is a sufficient and dependable market. This explains in considerable degree why heavy manufacturing industry in Canada cannot compete on even terms with the United States.

The spread of overhead costs leads on to consideration of the size of firm calculated to achieve least cost per unit. The present plant set-up at any time is viewed by the management as fixed or

constant, and whatever may contribute to its more complete utilization as decreasing the unit cost. Beyond full utilization of present fixed elements is, however, a decreasing cost associated with expansion of the whole business unit until optimum size is reached. When production advances beyond this point a condition of increasing cost per unit sets in. It is socially desirable to have every industry operated by firms of a size as nearly as possible to that which permits production at the lowest cost per unit, and operating in a manner so as to utilize fully the various elements and factors which contribute to fixed costs. This "optimum" size is not necessarily the sized unit most profitable from the business standpoint. It is the size to which perfect competition is ever tending to organize industry. When large-scale production pushes beyond it, the results are socially undesirable. The same is true when industrial organization falls short of it. Firms are sometimes too small because of lack of capital or mental habits of their leaders. Others under conditions of imperfect competition probably become too large. The United States Steel Corporation has been declared by observers to be less economic in operation in the post-war period than some of its competitors.

Economic Limitations on Size of Business Units.—Limitations on the size of business units, if we leave out reasons having their basis in political interferences,¹² and uneconomic (though legal) property controls, are largely of three or four general types. One has to do with that peculiar characteristic of consumers' desires which calls for distinctiveness in the product or in the servicing or selling of it. Fine shoes continue to be manufactured in small plants and most clothing is sold in relatively small shops where the salesman's experience of colour and style may aid the customer in his selections. A second reason lies in the fact of family organization. By its nature it consists of a small group and its limited number constitutes the normal production unit in such lines as agriculture and small retailing. Other labour is drawn upon as "hired men" and clerks, but the family provides the essential nucleus of labour as well as the capital and entrepreneurship. This group, with its unity based on sentiment and futurity as well as on legal and business grounds, is one that may scarcely be

¹²An example of political interference is the present discriminatory taxation directed against chain stores by many municipalities both in Canada and in the United States. See W. L. Thorp, in *American Economic Review*, March supplement, 1939.

challenged on economic considerations alone but from the standpoint of the welfare of the various family members as workers engaged in the common set of tasks, as well as from that of its success as a purely productive unit, it is rather evident that the family is not always economically defensible. It is a spendthrift organization in the use of capable talent, while it places too much directive authority in the hands of entrepreneurial weaklings. Its present falling size runs in inverse ratio to the requirements of a rapidly changing productive order.

A third limitation, already referred to under "specialization," resides in the physical nature of most industries. On the farm the principle of increasing cost soon dominates as the farmer attempts to expand through larger employment of capital and labour. In other industries goods of large volume cannot be concentrated in great production plants where consumer population is widely scattered. Furniture production as well as market gardening must suit its production units to the lay of population. Repair industries, especially those attending to large commodities and to road transport, must follow the consumer even more closely. Markets furthermore may be limited in size absolutely as well as by distance and transportation cost.

Finally, there is the limitation imposed by the ability of management to give as expeditious and as effective leadership and to maintain as effective control when the business attains great size. As an American writer sees it, "The chief executive has less opportunity to become familiar with the internal working of his enterprise. The growth of the concern compels him to become more and more a specialist on its external relations—its relations with government, with the rest of the industry, with the banks and with the market. More and more his time must be spent with bankers, attorneys, and large customers."¹³ This withdrawal to such a large extent from internal operations can be atoned for only in part by delegation of authority to others. Important matters must wait longer for his decision and the enterprise becomes less flexible and capable of adapting itself to changes in markets or conditions. As regards maintaining control over the working force, the method of "personal contact and observation" must give way rather early to the method of "statistical measurement of the performance of individuals and departments." This suffices up to a point but as the concern gets still larger the "further growth does not enable the

¹³S. H. Slichter, *Modern Economic Society* (New York, 1931), p. 136.

management to improve the statistical controls."¹⁴ Considerable difference of opinion exists about this last point and the ability of the higher executives to keep in touch and visit their will upon the whole organization through administrative and accounting devices. Other authorities sound a more optimistic note:

One of the most significant results arising from improvements in the science of management has been an increasing ability to secure from large units or "chains" the type of individual efficiency that a few years ago could be secured only in the small organization working under the direct supervision of a competent employer-owner. Under the older type of organization there was a gain in efficiency with size, up to the point where the reductions in costs, through ability to specialize and functionalize the work of a larger group of workers and the increases in process, purchasing and selling efficiency under larger scale operation, began to be more than offset by a reduced general efficiency due to the inability of the employer-owner to maintain close contacts with the members of the enlarged organization. Recent developments in management methods, and in accounting and statistical control, have apparently broken down these former economic limitations on the size of the individual organization or "chain," with the result that practically all types of business and industry are now open to efficient large-scale corporate control. If this tendency persists, it may represent a fundamental economic change having very far-reaching consequences. The field of operations for the independent owner-manager will be steadily restricted, and the young man of capacity and intelligence will have to look forward more than ever before to a career in which, except by some rare combination of good fortune and adaptability to circumstances, he will continue throughout to be a subordinate worker in a large corporation organization.¹⁵

The answer to this controversy may not be in terms of an uncompromising support or exclusion of either position. It may be found rather by reference to the distinctions between industries. There may be no limit to advantageous size in such industries as telephone and telegraph and railway operation and in the manufacture of automobiles. In the main, however, recent experience of depression in particular seems to support the idea that our greatest enterprises lack capacity to adjust as readily as those that are more moderate in size and held under closer control.¹⁶

¹⁴*Ibid.*, p. 137.

¹⁵From M. C. Rorty in *Recent Economic Changes in the United States* (New York, 1929), p. 864.

¹⁶For observations on the weaknesses of over-indulgence in integration in particular, see A. R. Burns, *The Decline of Competition* (New York, 1936), pp. 431-2.

CHAPTER X

FORMS OF ENTREPRENEURSHIP

IN the last chapter we have sketched the growth of large-scale enterprise during the past century and sought to give the reasons for it. We have also noted the persistence of the small enterprise over considerable sections of our productive order. In the present chapter we are to note the development of entrepreneurial forms capable of bringing together labour and capital in quantities large enough to make this large-scale production possible. First, however, we shall give attention to the older, simpler forms which are still the method of organization in small industry and with which most students are doubtless more familiar. The entrepreneurial forms as we find them today in America are of five types, viz. the *individual enterprise*, the *partnership*, the *corporation*, the *co-operative society*, and *state enterprise*.

INDIVIDUAL ENTERPRISE

The individual enterprise is typically the form used in farming, in small merchandising, and in lesser manufacturing. Here the owner is also the planner and the director of operations. He makes the purchases of such capital goods as he sees fit and sells the products as well as giving the lead in the fabrication processes or in directing the growing operations. He may borrow part of the funds necessary but if so he assumes the primary risk. All losses and all gains accrue to him. The advantages usually associated with the individual enterprise are, first, that it gives unity in management and operation and, second, that it offers the best possible stimulus to management and (in so far as the owner-manager is also a worker) to labour effort. The owner-manager is usually represented as one who is ready to give of his best to his enterprise, to work long hours, to battle against wastes, and altogether as constituting the ideal entrepreneur within the range of his powers. In the main, probably, the picture is true. Yet it may be that this glorification of personal profit as a stimulus is overdone. Many are the instances of poor

management of independent farms. Cases are seen, moreover, where a farm once poorly directed under such conditions, being bought by a wealthy townsman with the same farmer retained as manager, has shown a vast improvement in cultivation and in care of stock and machinery. Where the freedom of private ownership and management had failed to stimulate satisfactory economic behaviour, the sense of stewardship, or fear of inspection, brought forth better efforts. Individual enterprise frequently falls short, too, by reason of the person equation, even in the realm of small-scale production. Ease of becoming entrepreneurs, particularly when it comes through inheritance, is no guarantee to universal high-grade performance.

Apart from shortage of entrepreneurial talent and aptitude, however, the real limitation upon individual enterprise comes into operation when we approach the field of large-scale production. Operations here call for the use of more resources than one person can gather together or his limited credit can command. Furthermore, the direction of large enterprise calls for more diversified talent, and the detail gets beyond the grasp of the single directive mind. Probably there is no insurmountable difficulty in this last point, in theory at least, since experts can be hired and lesser duties delegated. In practice, however, the strength of the one-man enterprise is lost mostly at this point. With the normal run of independent entrepreneurs the virtue of such a business unit lies in the close individual oversight over all operations and the infusing of the leaders' own spirit and energies into carrying them through. Provided the entrepreneur is capable enough, the individual enterprise may reach the large-scale category if it can command enough capital.

PARTNERSHIP

The first of the forms of collective proprietorship that we should understand is the partnership. It also is comparatively ancient. In it two or more persons bind themselves together to conduct business jointly. By this means they are able to command greater capital than any one of them alone and also to bring together more ample and diversified directing talents. The relations between the partners are determined by the articles of the agreement and under this legally enforceable arrangement they carry on. Among the items covered in the latter are agreement on the amount of investment by each partner, provision for the distribution of profits and

losses among them, the part each shall play in the conduct of the business, and the salary each one shall receive. This assignment of functions entails a division of authority which is at once an advantage and a weakness. It suggests how men of different talents and training can supplement one another, but it implies as well how important it is that persons entering into a partnership should be like-minded with respect to many matters and ready to accommodate their views to others. Otherwise the unity so essential to good business policy and operation will be lacking. A rather complete separation of functions sometimes characterizes partnerships as where one partner is made responsible for the accounting, a second for purchasing, and a third for sales. Frequently, however, there is an area of overlapping as in merchandising where all partners give some of their time to selling over the counter. Partnerships are most common today in the field of retailing and jobbing and among professional men—notably lawyers and entertainers. They have given way to other forms in the realm of larger business for reasons easy to appreciate. In the first place, they are a cumbersome device where large numbers are involved. One can imagine the difficulty of a hundred or a thousand persons entering into and operating a partnership. In the second place, partnerships resting only on a contract among the members are broken up at the death or withdrawal of one of them, unless by mutual agreement it is arranged that someone shall step into his place. Most important of all, any one of the partners is liable to the full extent of his personal property for all debts that the partnership may fail to pay. For at law the latter has no standing in its own right. It may not sue nor be sued. It is not “a person” in the eyes of the law but is only a grouping of its members. With this condition holding it is easy to understand why people of any resources would hesitate to put their money in partnerships. The partnership is essentially a device for very limited numbers and must inevitably depend upon mutual knowledge and trust among the members.

THE CORPORATION

The great problem confronting the leaders of industry as the Industrial Revolution gained headway was to find some satisfactory arrangement for assembling great bodies of capital under centralized control for the promotion and permanent operation of large enterprises, and still guaranteeing to investors immunity against loss of

property other than that invested. The solution was found in the limited company or corporation, a type of organization which had its well-established beginnings in the specially privileged trading companies of England and Holland in the early seventeenth century, but which only began to function in the free modern sense two hundred years later. The key to the problem was the creation of an artificial person in the business unit itself with a name of its own quite distinct from the people who invested their substance in it. As such the corporation, owing its existence to the creative act of the state, has the usual rights of any person to hold property, to enter into contracts, to make use of the courts in enforcing its rights, and in general all that is necessary to carry on business. It likewise assumes all the economic responsibilities of a natural person, standing to be sued for its shortcomings in the event of failure to perform. Creditors, furthermore, are precluded from seeking redress beyond it through any right to enforce claims against the shareholders. The corporation is, however, a person only for special purposes. These purposes are defined in its charter, which is given to it at its inception, and beyond this in the general incorporation law of the province (or federal government if it operates under the larger jurisdiction). The time was when every corporation had to obtain its charter by special Act of Parliament but now it is only necessary to make application to the Provincial Secretary of the province (or Secretary of State for the Dominion) and if the purposes stated are not out of accord with the general incorporation law the charter is granted forthwith. The corporation thus rests on a contract, or set of contracts, between itself and the State which may not be exceeded or broken. Practically speaking, there is also a contract between the corporation and its stockholders by the terms of which they invest their capital and take the risk of losing it, in return for which the corporation agrees to recognize them as its owners and the ultimate controllers of its affairs including, of course, the disposition of its earnings. The evidence of this agreement is the stock certificate given to the shareholder. In the more complex type of corporations, the terms of this contract vary according to the differing nature of various forms of stock. It is in connection with inroads made upon this contract—expressed or implied—that some of the most difficult economic problems are rising.

The above is an attempt to explain the corporation as a legal entity invented at a certain stage of economic development to meet a particular need. It is essentially a legal definition. We cannot

appreciate or understand our economic order without attention to its legal aspects. It is necessary, however, to return to more purely economic considerations. From this angle we define the corporation in terms of what it does, how it meets the need we have spoken of, what its advantages are as compared with the older forms of entrepreneurship. The corporation in this sense is a device for gathering the savings of many and bringing them together under centralized control for the more effective production of goods. As an economic institution this is its reason for being and to the degree that it strays from this general purpose it is outside our concept, an alien trespassing where he has no right.

Corporation Advantages.—The first advantage of the corporation is that it is effective. It is capable of drawing more funds for capital purposes than the partnership and that for a number of reasons. Primary among these is the fact that it assures limited liability to the investor. With the exception of corporations of a particular type, notably banks and insurance companies, it assures him against loss of more than the amount of stock he actually subscribes for. With banks, under what is called double liability, he may in the event of bankruptcy be called upon to raise as much more.¹ Secondly, the corporation is able to procure funds on better terms than individuals or partnerships. Not only is it bigger and likely to be better known, but by virtue of the varieties of securities that it has to offer carrying different privileges and rights and expectations it may adapt itself to the whims of different classes of investors. For those who desire to take little risk and are content with a low rate of interest, it may provide issues of high class bonds. For those seeking big returns and who are ready to take a chance on their principal, it can offer common stock. For still others who may be ready to sacrifice certainty of return for the sake of more voice in control of the business, it can provide securities that are developed to that end. Of the various types of these we shall speak later. In addition to this advantage in securing permanent capital through sale of securities, it is likely by virtue of its size and status to control temporary funds also for working capital at better rates from the commercial banks. In the third place, the offerings of the corporation make their appeal because being in the form of shares represented by definite certificates they are easily transferable and hence capable of ready sale. With many investors this is highly impor-

¹Double liability is now being dropped in the United States and is subject to progressive reduction in Canada.

tant. Feeling that they may need their savings for certain reasons in the near future, they will hesitate to invest them in partnerships or mortgages or enterprises of their own. The corporate security offers them an opportunity—especially the well-known type of security listed on the stock exchange—for gainful temporary investment. A fourth superiority of the corporation as a money raiser is that it can raise new capital at will and thus increase the size of the plant. On the strength of its record and on the basis of a prospectus of its anticipated future earning power, it can issue new securities in types suited to the situation to obtain more funds to carry on larger operations.

All the advantages thus far considered are alike in that they contribute to the effectiveness of the corporation as a device for gathering funds. Our next thought has to do with the organization of control. In this matter the corporation is, according to its first intention, democratic in its main lines at the same time as it provides for a high degree of centralization in administration. In theory the ultimate control lies with the stockholders, but inasmuch as these are numerous and widely scattered and many of them not interested in actual operations they delegate much of their authority to a board of directors chosen from their number. To this board whose members are chosen by reason of their general business knowledge and for their association with other phases of the economic life calculated to be serviceable to the corporation, there are left all questions except those concerning matters of most vital concern such as disposing of the corporation's whole property, increasing the capital stock, or amending the charter. The stockholders with their meeting generally only once a year, are thus relieved of most of the burden of management. They, nevertheless, are in the picture of control. They act in the choice of representatives as well as in these undelegated functions. The analogy of the citizen choosing his representatives to legislate in his stead at the seats of government is not inapt.

The process of delegation of authority does not, however, stop with this. The board of directors is not a unit organized for day-to-day operations. Directors' services for their corporations are presumed to be voluntary, though they usually receive fees.² Their compensation comes also in profits from the business in the form of dividends on their stock. They meet only from time to

²In practice they frequently are remunerated on the basis of time given in attendance at meetings.

time at intervals stated in the by-laws of the corporation or perhaps upon special call by the chairman. The authority for the daily operation of the concern is, therefore, delegated along to the president of the corporation and he in turn looks to the executives heading the various departments such as the factory manager, sales manager, chief accountant, and secretary-treasurer as responsible for the lesser decisions and for advice in the larger decisions relating to their respective spheres. In larger corporations there is usually also a general manager standing between president and departmental executives. The president himself is normally a member of the board of directors, usually the chairman. The picture we have in mind, therefore, of the corporation as an organization for control is one where all authority emanates in the first instance from the far-flung population of stockholders, but, with some qualifications, is assembled for practical purposes through this process of delegation in the board of directors and in the president to be distributed from this focal point through the departmental executives for the satisfactory carrying on of the business. Needless to say, in the actual give and take of business life, corporations do not all run true to the details of the pattern. Personality plays its part and so does the nature of the business. In addition to this, the very complexity of modern business life has tended to warp the pattern somewhat through strengthening the hands of those who are at the centre in contact with the realities of the business at the expense of those who are remote. This has shown itself especially in the tendency of the president to establish his ascendancy over the rest of his board and to become the "key man" for the entire control of the business. Building up his advantage through his relations with employees and bankers as well as with consumers in the disposal of the product, he is able to dominate stockholders' meetings as well as his board. Instead of functioning as a democratic institution, with those concerned participating with some intelligence in its direction, it becomes largely a one-man-control organization. This seems to have been a development inevitable in the natural course of events. Other more spurious developments in the corporation we shall deal with presently.

The third main advantage of the corporation is that it has permanent life. It does not die with its members or fall with their withdrawal. Through the device of transferable shares it may continue on with a changing group of stockholders generation after generation as long as its operations warrant. Corporations usually

stand to lose more, in fact, from the death or defection of their important salaried officials than from changes in owners.

The reader will do well in assessing these various advantages of the corporation to take under consideration also the point of view. Whose advantage are we speaking of—that of the investor, the organized business unit itself, or of our whole society? The answer he will find to be "All three."

The Various Forms of Securities.—The reason for issuing different classes of securities we have already indicated in part. We shall now describe the chief types and explain the reason more fully. The first class is ordinary *common stock*. This is essential to every corporation. With small corporations it is often the only type. Here the total ownership is divided for sake of convenience and salability into a number of equal parts or shares, entitling the holders of the securities to equal rights in the earnings, and in the event of disposal of the assets, in the proceeds from them. The profits of the business that are not "ploughed in" and so devoted to its expansion are paid out annually, semi-annually, or quarterly as dividends. Stock may have a par value or it may be issued without reference to such. By par value is meant a nominal value written into the certificates at the time of issue, the most common figure named being \$100 though it may be \$50, \$25, \$1, or, in fact, any amount desired. When it is sought to distribute the offering widely among the non-moneyed classes, the denominations are made small. When stock is given a par value, the law in Canada requires that it may not be offered by the company at less than the figure named, though it may be sold for more. In its subsequent course it may drop far below par and transference may take place at any figure. The actual value of shares of a going concern really has nothing to do with this par value named in the first instance. It may rise to double or sink to half the par value. Yet the language of the market carries the fiction of percentages when it comes to quoting the earnings. A certain company is thus said to have declared a dividend of 12 per cent, for instance, when an examination of the conditions shows the price of the stock itself is listed at 210, which means that where a man has bought it at that price he is getting not 12 per cent but less than 6 per cent on his investment. Some people say, therefore, that the time-honoured practice of issuing stock with a stated par value is pointless. They assert, furthermore, that it is confusing in that it misleads people, who know no better, into thinking that par value has something to do with controlling the actual

value. What people should really be considering is stock for what it is, viz. a fractional part of the ownership in an actual concern with assets and liabilities and earning prospects. Against all this the defenders of the use of par value reply that there is social justification for the practice. They argue that since stock usually sells on the occasion of its issue close to par, therefore the par value of all the shares added together is an indication of how much actual investment was made in the concern. There doubtless is some virtue in this contention in a society which pretends to a degree of control over prices, rates, and profits. Anything that contributes to clarifying the question of actual investment is important also for different classes of stockholders. As a company grows in years, however, and builds out of its own profits, the par value of original stock becomes of little importance except as a rough indicator of success or failure over a long period. Whatever the merits of the controversy, an increasing number of firms are bringing out their stock without par value. In this way they are able to try the market with it at any price they see fit and the public has no index in it of what the early investment was.

The corporation may issue also *preferred shares*, which means they have a claim on the company's earnings prior to the common stock. Preferred stock certificates, unlike the certificates of common, name a definite percentage or amount per share that shall come to their holders before the common is entitled to any. This does not mean that this amount must necessarily be paid. All dividends may be "passed" if the directors feel that the circumstances require it. When dividends on preferred have passed in whole or in part for a year or more, these "back" dividends must be made good as well as those of the current year before profits may be paid to the common stockholders if the stock is *cumulative preferred*. Where this is not stated on the certificate, dividends once passed are no longer a claim. Preferred stock in a corporation—particularly when it is of the cumulative variety—being *senior* to the common, involves less risk than the latter. On the other hand, unless it is *participating* preferred it does not offer the same rich possibility, since all that is left of the earnings available for distribution, after the definite 7 per cent, or whatever rate is named on the preferred, is paid, goes to the common. In the case of a highly successful company, the common may be getting 12, 20, or even 50 per cent, and its price will be quoted on the exchanges well above the preferred. The preferred, however, may be participating,

which means that it shares in the earnings with the common according to some definite prearrangement. Often the participation begins when the payment on the common has reached that on the preferred. Usually, however, preferred shares are cumulative but non-participating. Yielding definite returns and not looked upon as a speculation, they are appreciated by the more conservative public as an investment. They are valued by the corporation as a means of gathering funds without compelling a sharing of the large gains that the promoters of the corporation are hopeful of obtaining. Frequently, they are used in connection with expansion in a successful business years after it has become a going concern. Where profits are high, it is considered good business to borrow at 7 per cent for fixed capital purposes. The company, furthermore, is likely to introduce an element of elasticity by arranging that such stock shall be callable by it in the future at a stated price. By this means the management, if it believes the market to be favourable for borrowing in a cheaper way or if perchance it is not making use of funds that it has, is in a position to enforce the return of these shares. Preferred shares are often favoured again by the directing group in the corporation because they normally carry no voting rights. This leaves the control more securely in the hands of those who have piloted the ship thus far. Whether this development is socially expedient or not is a question that will concern us later. It represents an important departure in principle and weakens the corporation as a democratic institution.³ Property without control is something less than property. The innovation puts the preferred stockholder in a category by himself. He is neither a responsible owner nor has he the rights of a creditor. His outstanding attribute is an exercise of faith. These remarks should be qualified in some sense, however. The preferred shareholder in some cases has voting power reserved for him in the event of his dividends being passed for a stated period of years. Sometimes he also has a voting preference in regard to special matters, as in the case of the creation or increase of funded debt or the enlargement of the preferred issue itself. Preferred stock, it should be added, is, when so stated, given preference in the claims against assets in the event of failure or sale.

In pre-war days the above constituted the main distinctions in stocks. More recently, however, a new alphabetical terminology has come into wide favour. Many of our well-known companies

³Since 1935 no shares may be issued by companies taking charter from the federal authority in Canada without voting rights.

are issuing *Class A and Class B common*. For the most part, the distinction has to do with voting rights. By disfranchising a large part of the common and selling it to the public as Class A and keeping Class B closely held, the directing group are enabled to ensure their control over policy without giving these outside investors any advantages as to dividends.

In our discussion thus far we have probably given the impression that stock is always issued for cash. This is far from true. It is common practice for the organizers of a corporation to reward themselves for their services with shares of stock. Similarly, stock is sometimes given to bankers or securities' salesmen as their reward for selling stocks and bonds for the corporation. It is also given in exchange for land or capital goods necessary to the company. In the event of a corporation being formed to take over an operating partnership or individual enterprise, the majority of the shares may be issued against such consideration. All these practices are legitimate provided the consideration is ample. If, however, the property taken over is overvalued, or the service against which blocks of stock are issued is negligible, injustice is done as between these groups and those persons who have paid in cash.⁴ The use of no par shares in this connection permits of questionable transactions because the directors can put any value they please on the stock.

Another use of shares is to issue them as a bonus with other securities. It has become quite common to stimulate the sale of preferred stock and command a good price for it by offering free with each share another share, or part of a share, of common. This is doubtless a good device for bringing in funds in the present but, needless to say, it is likely to lessen the returns to the earlier holders of common stock in the future. Its legality may well be questioned.

Stock again is sometimes used to pay dividends. Instead of making payments in cash, the directors issue new stock to the old holders instead. If the company is really making good profits and extending plant through "financing through surplus," there may in some cases be little to criticize about this. Yet it should be said that it blurs the record of the relation between investment and obli-

⁴The federal Companies Act in Canada (1934 and 1935) requires that when par value shares are issued against property or services, the directors must, by express resolution, determine that the consideration received is the fair equivalent of cash for the total nominal amount of shares issued. Provision is made for the directors to apply to the court to rule that the consideration is a fair equivalent (section 12, subsection 9). This does not apply, however, where the stock is of the no par value type.

gation as represented by securities. It makes more difficult any attempt of public authority to check up on profits actually made per dollar. Some concerns have a special reason for this practice in that they are enabled through it to keep down the appearance of great profits. By increasing the number of shares they keep the dividends per share and also the price of the shares from rising. Increase of shares, furthermore, means that hereafter there will be more stock to share the earnings and for this increase of claimants in the future the present common stockholders may be sparsely repaid. There may be a more reputable reason, however, for stock dividends where a corporation wishes to keep its stock at lower price levels in order to make it available to the rank and file of investors. This may be done even more effectively by a deliberate division or "split" of the shares, putting two or more where one existed before. The Canadian Pacific Railway made a split of four for one in 1931, the avowed object being to place the stock more largely in the hands of Canadians in the future.

"Rights."—The law in Canadian provinces requires a corporation when it brings out a new issue of securities to offer them first to those already holding stock in the company. Some corporations go farther than this in that they issue in advance of the shares rights to the present holders to buy shares at a stated price, the price of the latter being set well below the expected market price. These rights themselves are transferable and are, therefore, a commodity for purchase and sale. Fluctuations in the price of stocks are sometimes to be interpreted in terms of impending issues of rights or of their aftermath. Economically there appears to be little to be said for the whole procedure.

Bonds as a Capital Raising Device.—Differing from the various types of stock, yet also serving the corporation as a means for obtaining permanent capital, are its bonds. Unlike stock certificates, which declare their holders to be part owners of the corporation, bonds are credit instruments. They are its promises to pay back after a specified period of years money which it has borrowed. They bear interest at a definite stated rate. Interest and principal must be paid according to the terms as with any promissory note. Dividends on preferred stock may be "passed"; but not so the interest on bonds. The claim of the bondholder on earnings, and also on property in case of a dissolution, is prior to that of the stockholders. But while bonds are thus safer for the investor, their rate of interest is usually less. For this reason it is often good financing for a cor-

poration of proven earning power to obtain new capital through issuing bonds rather than preferred stock. Bonds are of many kinds and grades, usually involving some type of special security. Normally, those secured by a mortgage on the real property of the corporation rank the highest, while debenture bonds which simply have a prior claim on earnings are the least desirable. Collateral trust bonds which are specially secured by mortgage on other securities, rate according to the merit of such securities.⁵

The market value of bonds normally fluctuates much less than stocks, hence they lend themselves less to speculation. Quotations on outstanding bonds of good quality show above par when the general interest rate on long-term funds has fallen, as at the present time. They drop below as the interest rate rises. Each bond as it approaches maturity comes back to par.

A form of security recently coming into use in the United States is the *income note*. This is not a bond because, unlike a credit instrument, it imposes no absolute obligation upon the company as debtor. On the other hand, it differs from stock in that it involves no ownership but is simply a promise to pay income if, as, and when the firm has made it, at a stipulated rate. In some sense it may be considered a child of the depression, for so many bonds became, in fact, nothing more than claims on income. Legally their holders had the right to force collection of interest upon the issuing companies, but practically there was no point in their doing so. A new instrument was needed to give expression to the reality of the situation.

Developing the Financial Plan.—The arrangement of the different types of securities that a corporation shall use, the proportions among them, the interest rate to be offered on its bonds, the dividend rate and qualifications concerning the preferred stock—all this is referred to as the financial plan of the corporation. The selection and ordering of items in the plan will depend upon a number of considerations prominent among which are degree of certainty and regularity of income, the readiness of the market to absorb different securities at the time, and how much it is desired to maintain control of the affairs of the corporation in present hands. Over all and through all runs the hope of profit. Profit, of course, suggests that

⁵Bonds are greatly used by our various governments as a way of raising capital, the "funded" indebtedness of our federal, provincial, and municipal governments running into colossal figures. In such cases the security of the investor is the tax power of the government involved.

capital be obtained at the lowest cost. Considerations of solvency in the future, however, preclude the use of large dependence on bonds where the company has not proven its ability to make a regular income. Considerations of an undependable future may make it inadvisable, also, to issue large quantities of preferred stock of the cumulative type. It is well known, too, that the presence of quantities of senior securities endangers the reception the market will accord to the common stock. Frequently, we read in the columns of our financial journals devoted to analysing the merits of different securities, what such and such a stock has in the way of prior claims to the earnings of the company before it begins to participate. Some sense of the variety found in the financial plans of different corporations may be had by looking over the financial record of a number of companies as reviewed in the journals. The capitalization (a term which includes the bonds or funded debt as well as stocks issued or authorized) of a few of these is submitted below. Authorized stock, it should be said, consists simply of shares permitted in the charter but not yet issued. Until they are actually issued they are, of course, no obligation of the company.

COMPANY X (Gold Mining)

	Authorized	Issued	Outstanding
<i>Capital stock</i>.....\$1.00 par value....	\$5,000,000	\$4,750,000	\$4,610,065
Including 139,935 unsold shares issued as fully paid, and held in the treasury.			

COMPANY Y (Grocery Chain)

	Authorized	Issued	Outstanding
<i>Class "A" Cumulative, redeemable</i> ...no par value..600,000 shares		467,541 shares	445,056 shares
<i>"B"</i> no par value.....600,000		383,300	383,300

COMPANY Z (Manufacturing)

	Authorized	Outstanding
<i>Share capitalization</i>		
Common n. p. v.....	350,000 shares	270,000 shares
Preferred 7 per cent cumulative.....par value \$100.....	\$2,000,000	\$1,940,600
<i>Funded debt</i>		
First mortgage 4½ per cent bonds series A, due 1955.....		\$4,483,000
The company owns the issue of \$1,600,000, 5½ per cent bonds of the A.B.C. Co. (a subsidiary).		

More informing in many respects than a mere portrait of present capitalization is an examination of the financial history of one of our great corporations. Many of the points that we have discussed in a general way in this chapter may be given concrete illustration from such a record and also from the more elaborate advertising material offered through the financial press.⁶

Relations with Other Financial Institutions.—Entrepreneurship with corporate forms of enterprise involves the promotion of the enterprise by those who have sensed its possibilities and worked out the details. It also involves, as we have seen, the formulation of the financial plan and the sale of the securities. As a going concern, it involves normally expansion which may come about entirely through the directors turning part of the profits year by year into the business. Usually it is accomplished in greater or less degree, however, by an appeal to the public for additional funds through the sale of new securities. Both new and old concerns normally use a specialized institution called the *investment bank* to take charge of this operation. The investment bank, in fact, does more than simply act as a salesman. With its superior knowledge in the field, it guides the promoter or the directors in the selection of the securities in the first instance. It puts its own experts to work in analysing the whole project. If it is impressed favourably, it takes the securities off the company's hands through actual purchase and provides the latter with funds in advance of their further distribution. It does this because it hopes to sell them for a price higher than it gives. Already in advance of its purchase it has sounded out the possibilities of placing large blocks of securities with important investors such as insurance companies, trust companies, and other organizations which, in their own operation, draw together quantities of funds. Nevertheless, it assumes risk in a large way. If the issue is large, the banking house first consulted by the company may invite others to associate with it in floating the issue, forming what is called a syndicate. This risk-taking activity by investment bankers is known as *underwriting* and, along with the final placing of the securities, is vital to successful corporate promotion. Investment banks, along with the brokerage houses which assist them in combing the market for final investors, constitute a phase of modern specialization. The banker as underwriter, furthermore, does not always dispose of all the stock

⁶See, for instance, the record of the Canadian Pacific Railway (the Company's own statement) in the *Financial Post*, June 19, 1930.

he purchases. He chooses rather to retain blocks of voting common stock strategically designed for control and thus becomes a strong determining factor in the company's policies. Apart from hopes of direct gain through speculation on these shares, there may be good reason for his wishing to have an active hand in the company's affairs in case the larger body of stocks does not find immediate favour with the public and he is compelled to retain part of them.

The investment banker, furthermore, links up with another institution, viz. the stock exchange, which is an organization for trading in and for publicizing the merits and demerits of important securities. The floor of the exchange is denied to those who are not members. The industrial corporation itself has no direct access to it but all investment banks and important brokerage concerns maintain "seats" there. Through them and through the lists of prices published in the newspapers and financial journals at which various stocks have changed hands during the previous day or week the market is organized.

With the aid of these various institutions the corporation draws on the public for funds, or, to give it economic expression, with their aid capital goods and labour resources are brought to the disposal of corporate entrepreneurs acceptable to the financial leaders.

THE GREAT CORPORATION

Abuses of the Corporation.—Like many another institution that has risen in answer to a real need, the corporation has had its fine possibilities marred through abuses. These have been of different kinds—some centring on the liberties taken by directors in the uses they have made of the authority delegated to them by the shareholders, wherein they have committed acts directly opposed to the interests of many of the latter; others associated with misdeeds of promoters and investment bankers at the time of the birth of the companies, whereby acting together they have laid their plans so as to turn undue portions of the forthcoming profits to themselves; still others have had to do with the failure of promoters, bankers, and brokers to give any adequate assistance to investors to enable them to know the merits and demerits of the securities they were buying.

The incidence of these unfortunate developments, it will be observed, falls upon investors—upon some classes of investors more than others—though indirectly they weaken the operation of the

whole productive order. The reason for them may be found in the shortcomings of personal ethics as shown in this readiness to turn what should be considered positions of social responsibility to purposes of private gain. Commentators have lamented this failure on the part of business leaders to entertain the same high moral standards in this realm of impersonal corporate relations that they practise in personal dealings. Men who would never stoop to dishonesty or betray a trust in their relations with other individuals see nothing amiss with sharp practices where the effects amount to injustices to thousands. Remedy some people see, therefore, in terms of an improvement in social ethics, calculated to bring the same decent standards of honesty into this realm of impersonal corporate relations as now exist in the personal. Others, while not denying the basic reason to be human weakness, think it more practical to interpret the problem in terms of inadequate corporation laws. Consequently they hope to prevent much of the present exploitation of investors, both stock and bond holders, by amending these laws and providing for their enforcement in a manner likely to prevent an opposition from developing between self and social interest, and otherwise to force these corporate leaders to improve the quality of their performance. It is our belief that the chances of betterment will be increased by applying pressures of both types. In fact the two are mutually supporting. Nevertheless hopes of immediate improvement would seem to lie chiefly with the second way of remedy.

More specifically what are the corporation evils? And how and when have they made their appearance? The first that we shall consider is that of over-capitalization which means the development of a capital and bonded liability greater than the amount of cash or equivalent actually taken in. It is the natural expectation that when stockholders join in the ownership of a corporation through the purchase of shares that each shall pay cash or the equivalent of cash for the shares he acquires. Only thus is it possible that justice be done among them, for if one gets a share for \$50 while a second pays \$100 they are not on an equal footing. In this case each share will have \$75 of assets behind it so that one has been mulcted of approximately \$25 by the other. Corporations may in practice discriminate among investors in respect to sales for cash but they discriminate on a grander scale when they issue blocks of shares to promoters and investment bankers for services valued at more than they are worth, or to other insiders for property likewise grossly

overvalued, at the same time as they are selling shares to the public at their full cash value. The Royal Commission on Price Spreads found that, while corporations were using appraisal companies to evaluate property and were thus avoiding the charges of naming purely arbitrary prices, certain of the latter appeared willing to lend themselves freely to the purposes of writing up the values and showed every evidence of the general unreliability of their certification.⁷ Overcapitalization has been practised on the grand scale particularly in connection with consolidations where several companies are brought together into one, or brought under the control of one, and where vast quantities of securities in excess of those existing before are brought into being and issued—some for cash, but others for property duly written up, and still others for services often largely imaginary. A classic example is that of the United States Steel Corporation which in 1901 developed from a background of nine companies with assets of approximately \$700,000,000 and proceeded to issue stock and bonds to the extent of \$1,402,000,000. Activities of this kind are frequently spoken of as "stock watering."

A second abuse has been connected (particularly in the United States) with the assumption of the power by directors to change the proportional lay-out of the financial plan arbitrarily after stock has been sold to the public with the result that former investors in good faith have their participation in the earnings lessened. The buyer has reason to think when he looks over the prospectus submitted by a security salesman who is advising him to take shares in a corporation, that each share that he buys has its pro-rata claim to its part in assets and earnings, and that this condition will continue, at least within the limits of shares authorized. In the earlier days of the corporation it did continue until, by majority action at the stockholders' meeting, additions or reductions were agreed upon, but later it came about that, by board action only, additional stock could be issued equal in its claims or even senior to much of that already outstanding.⁸ This tended to dilute the participation of

⁷See *Report of the Royal Commission on Price Spreads* (Ottawa, 1935), p. 38. See also the Dominion Companies Act, section 12, subsection 9, for special provisions regarding sufficiency of consideration for stock with par value.

⁸See A. A. Berle and G. C. Means, *The Modern Corporation and Private Property* (New York, 1933), chap. xx. This abuse is prevented in Canada under the Dominion Companies Act, 1935. While directors may issue authorized shares at will, increase beyond that can be accomplished only by a two-thirds majority of subscribed capital seeking application for supplementary letters patent.

the older shareholders—and especially where new shares were of the no-par value type and were sold for little consideration. Another practice in this category has been to shift the assets from group to group within the corporation by making use of funds that were received from the sale of no par stock to pay dividends on other stock. It is the expectation of corporate financing that money derived from sale of shares shall be treated as capital to carry on productive operations of the company. No worthy purpose can be served by collecting it from people and then paying it back in dividends without applying it in any way to productive processes. But too often it has happened that funds collected from Class A stock sales to the public have been distributed as dividends to both Class B and Class A holders where the former have really paid nothing substantial for their stock and the whole transaction is more in the nature of a syphon running between the two classes of holders than that of a true creation of earnings through production.⁹

A further practice which has come into prominence recently in the United States and which operates to effect a similar injustice is that of refraining from paying dividends when it is to the interest of large sections of the stockholders that they should be paid, and carrying an unduly large proportion of the earnings to surplus and thus holding them in the business. Part of the stimulus for this has been due, it is true, to the wish to escape taxation, but a further motive undoubtedly also prompts it, viz. the capture of dividends—particularly those of the non-cumulative variety—from present shareholders in favour of those who as insiders expect to create securities in the near future capable of participating in all distributable earnings and surplus. Sometimes this second step is accomplished through the issue of bonus shares free to all those now holding common stock in which case it is referred to as “cutting a melon.” The federal Government of the United States has struck at this practice by laying a tax on undistributed surpluses of corporations. The remedy has not gone unchallenged, however, the criticism being that it is liable to discourage the practice of building up the successful concern through carrying generous portions of yearly earnings back into the business. This last, which is technically referred to as “financing through surplus” or “financing from within,” as contrasted with paying out the earnings as dividends and then

⁹Limited in Canada to 25 per cent of proceeds.

appealing to the public (including the present stockholders) from time to time for fresh funds to finance expansion, is lauded as "good conservative financing" and is especially favoured by bondholders.

Control in the Large Corporation.—We may pause here in connection with our attempt to understand corporate evils as flowing from the failure of directors to do their duty, long enough to describe more clearly how these insiders maintain control. It is necessary to state at the outset that, as the corporation has grown larger and stockholders have increased in number and become more widely scattered, the actual control by stockholders over the action of directors has become less and less. With increasing numbers and increasing space between them there has developed the device of voting by proxy, which means that most shareholders authorize specified other shareholders who are expected to be present at the stockholders' meeting to "Vote their shares" for them. In practice distance from the scene of activities together with a lack of knowledge of operations has served to develop in the average stockholder a sense of personal inadequacy. This has paved the way for his present purely passive role which in many cases borders on indifference or complete neglect. What is the use, he thinks, of voting even by proxy when he is only one in 100,000 and when he knows almost nothing about the persons who will be at the meeting? He therefore disposes of his problem by signing the proxy form sent to him by those at present directing the corporation authorizing one of the persons from the list of names appearing there to vote in his stead. Or perhaps he throws the form away. This loss of democratic control has been accentuated in the past by the issue of quantities of shares without voting rights and also by the laxity of corporation laws. There is nothing in Canada to prevent making use of the possibilities existing in the selection of types of shares to the end that some stockholders will be paying cash for preferred shares of one kind and another, while financial interests will be gaining control (as well as having the prospect of profits) through allotting to themselves the necessary voting stock "for intangible, if not illusory" considerations.¹⁰

If stockholders have lost their hold, what then is the new basis of control? The answer is to be found for both Canada and the United States in two recent studies, for the former in that of the

¹⁰See R. G. H. Smail "The Dominion Companies Act, 1934: An Appraisal" (*Canadian Journal of Economics and Political Science*, vol. I, Feb., 1935).

Royal Commission on Price Spreads¹¹ and for the United States in the very commendable book entitled *The Modern Corporation and Private Property* by A. A. Berle and G. C. Means. In presenting very briefly the result of these investigations let us remind the reader that what we are saying—as well as much of what we have stated immediately above—refers to the larger type of corporation. The American study, in fact, dealt exclusively with the two hundred largest concerns in the United States while the Canadian study confined itself to half that number. It is well to note that numbers of smaller limited companies still operate on the models as described earlier in the chapter.

The thesis of Berle and Means is that “since direction over the activities of a corporation is exercised through the board of directors we may say for practical purposes that control lies in the hands of the individual or group who have the actual power to select the board of directors (or its majority). . . .”¹² Their finding was that with only 5 per cent of the big American companies was control over selection of directors in the hands of the majority stockholders—truly an undemocratic showing—while 88 per cent were controlled by minorities through one means or another. In Canada the majority control was somewhat higher at 20 per cent while the minority control stood at 66 per cent. In both countries a considerable number were labelled as privately controlled where one person or group owned 80 per cent or more of the voting stock, which accounts for the fraction remaining in both countries. Analysis of minority control reveals three different types in both countries, viz. (1) minority ownership control on the basis of a closely centred ownership running from 20 per cent to 49.99 per cent of the stock; (2) control through various legal devices without majority ownership; and (3) management control. Of the three the dominant form as judged by amount of total assets in both countries is the last named. Its prominence seems to be a result of developments of the last quarter century and is a natural outcome of the very wide dispersion of stock and the practice of using proxies initiated by the management. This in view of the quiescent and passive attitude of stockholders practically ensures this year’s management in having its selected representatives elected for next year. Rarely does the management that thus controls the election of its

¹¹Report of the Royal Commission on Price Spreads, chap. III.

¹²See *The Modern Corporation*, chap. v.

successors in power represent as much as 5 per cent in actual ownership. Often it is less than 2 per cent.

The conditions that make possible minority ownership control are also wide dispersion of the majority stock combined with individual or group holding of a large minority block. This individual or closely centred group is enabled by the very circumstance of its unity to practise strategy in having its way. Sometimes, doubtless, management attends upon its wishes through mental habit. Such would be the case where the corporation has grown from small beginnings in which the individual or family now dominant as a minority stockholder was formerly dominant by virtue of actual management. Control through legal devices requires some explanation. One legal device already mentioned is that of non-voting stock calculated to disfranchise some portion and frequently the majority of the stockholders leaving practically complete control to the remainder. A second and equally complete method is that of using a *voting trust* whereby the owners of stock assign their voting rights to a small group of trustees. Neither of these devices has been used in Canada to the extent that it has in the United States, though the first did make headway in the period of the twenties. Quite different is it with a third device known as the *holding company*. Of all industrial companies with gross assets over \$1,000,000 in Canada in 1932, 56.1 per cent of the number, involving 82.6 per cent of their combined assets, used the holding company form of organization as a way of control.¹³ The pure holding company is a corporation chartered for the express purpose of holding the shares of other companies. By issuing stock of its own and exchanging it for a controlling portion of the stock of operating corporations, it is enabled to control their various policies toward some common purpose. When it is desired, for instance, to limit or put an end to competition among a group of companies without breaking the integrity of the different companies as operating units, the holding company is the ideal instrument for accomplishing it. The holding company is an American invention of fifty years' standing. In the early period of its use, it was thought necessary to hold slightly over 50 per cent of the stock of the operating subsidiary companies, but in post-war days with the support that comes from issuance of non-voting stock and wide dispersion of much of that which has votes, substantial control can be obtained often by holding less than 10 per cent of actual owners' capital. The holding company device,

¹³Report of the Royal Commission on Price Spreads, p. 18.

furthermore, may be used several times in the same situation to affect a centralized control with a minimum amount of investment. Thus a second holding company is formed to hold a controlling fraction of the stock of the first holding company, or perhaps to hold a fraction of the stock of several concerns which are already holding companies. This is called "Pyramiding the voting control." By this means industrial operations involving the use of hundreds of millions can be controlled by an insignificant amount of actual investment.

Holding companies, it should be said, do not always exist in the pure state just described. In four cases out of five in Canada they function partly as holding companies and partly as operating companies. A corporation, heretofore an industrial operating concern, for instance, may become a mixed holding company through buying up the controlling stock in a couple of smaller companies which produce certain production goods necessary to the manufacture of its own product. By this means it can ensure itself of having a satisfactory supply of such goods at all times and perhaps gain an advantage over a competitor who has also been depending on these two companies for supplies.

Other Abuses of Control.—To return to the subject of corporate abuses we have to consider three other practices associated with the control of the corporation as a going concern which are calculated to weaken it as an economic institution. The first of these is spoken of as the *interlocking directorate*. The custom is for corporations both at the time of formation and later to name important business men to places on their boards. Sometimes this is done for the sake of prestige, sometimes for reason of belief in the real entrepreneurial ability of such a one, quite frequently because of his association with banks or other concerns whose business friendship is essential to the corporation. The unfortunate result is that such men in every community find themselves on a number of boards, a fact which not only makes an impossible demand upon their time and energies if they really size up to the responsibilities of an active director, but places them in a strong position to influence the policies of many companies at once. Inasmuch as these companies are likely to have dealings with each other, it is to the personal interest of such a director to direct policy to the end that profits go chiefly to the concern in which he has the largest holdings. At its worst the situation is reflected in a great company making small profits for its investors while it pays unduly large prices for certain raw materials,

perhaps, supplied by smaller companies in which such directors own much of the stock. In less flagrant form it shows in companies patronizing other companies through selling to them or buying from them when straight business interest dictates that they should trade elsewhere. Or again it may take the form of offering little competition to other companies where under other conditions the first companies would seek to obtain a larger share of the market.

A special form of the interlocking directorate developed to immense proportions in both the United States and Canada in the 1920's through the activities of the investment banker. It arose largely in connection with the underwriting activities of the latter, especially in connection with consolidations of firms already existing or through reorganizing them after they failed. It was pointed out above that investment banks make a practice of taking their remuneration partly in the form of voting stock of the corporation whose securities they have underwritten and the rest of which they sell. This is done usually with the intention of playing some part in the subsequent affairs of the company. Logically it seems reasonable that they should do so and, as viewed from one angle, the course looks justifiable economically. Along with the promoter they have examined the whole prospect. They know more about its future possibilities than do the investors and they are financially interested, so long as they still have unsold stock, in its success. On the other hand, the investment banker is not a true investor, interested in the development of the company as a productive, income-earning unit. He is interested in securities and their ups and downs. Primarily he is a speculator in securities and sees economic life from that point of view. The time may well come when it will be to his interest to depress the value of a company in the interest of forcing a reorganization or a consolidation with other concerns in which he has also directorial influence in order to profit more largely through new underwriting ventures and through coming into possession of greater quantities of securities. The number of investment banking firms, furthermore, being very limited and the association of those that do exist being relatively close in their underwriting and in their plans for disposal of big issues, they stand through such retention of control in individual corporations to benefit through manipulating industry rather generally for the furtherance of speculative ends. In the United States, it is said the ramifications of the influence running out from two or three of the best-known investment banks through their having different members of their firms representing

them on the boards of many important corporations is indeed startling. It is asserted that these powerful houses are in a position to do a lot of dictating as to how various business concerns and even whole industries are to be run. As one popular journalist puts it, "those who control the purse strings are in a position to dictate terms, if the strings are to be pulled and the purse opened." Furthermore this is true not only of corporations as going concerns but of the conditions under which they make their start. Since most of them look to investment banks to underwrite and dispose of their stock issues, it is difficult for the regular type of entrepreneur to make entry into major industries on any considerable scale without their permission. Professor William Orten in a paper read before the American Economic Association a few years ago spoke as follows: ". . . Control of the course of industrial development has shifted to a marked degree from the actual entrepreneur whose business it was to know thoroughly a specific market in terms of physical supply and demand, to agencies concerned mainly with financial questions of capitalization and net return. Theoretically, perhaps, this should come to the same thing; practically it does not. The effect of diminishing costs, so far as it is still realized, tends to be taken out in capitalization rather than released to the consumer under the stress of competition, a fact which was strongly illustrated in the easy days of Coolidge prosperity; and the expansion of the market for goods becomes less evident than the expansion of the market for securities."¹⁴

We might add that these profits "taken out in capitalization" frequently come no closer to the cash investor than they come to benefiting the consumer. In fact, it seems that sometimes too little attention is paid to profits being made at all by means of energetic production. Domination of industry by financiers, or by any persons for that matter having interests and controls in many different concerns, is not likely to bring full and hearty self-interest to bear upon problems of productive efficiency. It is probably not too much to say that both from the standpoint of preparation for the task and from that of motivation, leadership of industry is better in the hands of industrial enterprisers representing the engineering and marketing point of view than it is in the hands of bankers. Finance is important for industry so long as it lends itself to wealth increase. The trouble with it is, as it presents itself here at least, that it is too much interested in debits and credits.

¹⁴*American Economic Review*, March supplement, 1931, p. 96.

The third abuse that we have referred to under this heading is the practice of insiders trading on the stock market in the securities of their own companies. In view of their superior knowledge, considerations of justice as between the traders themselves would seem to raise a question concerning the decency of such trading. More important than this, however, is the effect the practice may have upon the running of the companies themselves. Speculating directors may, in anticipation of acquiring a block of securities to hold for a rise, attempt to curtail the operations of a company and thus lessen profits temporarily so that the securities will drop in price. Later, with the idea of unloading these stocks in mind, they may speed up production and sales to a level that cannot be long maintained. Such tactics making for unnecessary irregularity of performance are wasteful of resources and particularly hard on labour. Even where the speculators do not actually interfere with the operating activities of the company, they may spread untrue reports about the company's condition. Such action is reprehensible from the economic standpoint inasmuch as it prevents the best distribution of investment from being approached. The whole economy is best served where investment funds flow readily, and unimpeded by ignorance and falsehood, to the concerns of highest earning power, and where they refuse to flow to those of low returns. Where well-known insiders, therefore, permit false rumours concerning their companies' prospects to spread, they are guilty not only of an ethical but also an economic wrong.¹⁵

Abuses of Selling.—We come finally to a set of abuses connected with the selling of securities. It will be appreciated that here even more than in connection with more tangible goods the buyer is uninformed. Not being able to examine the goods himself, he is very dependent upon representations of salesmen and the statements issued by companies and underwriters. Consequently it follows that the interests of economy require that true and full information be given as far as possible and that nothing be done to confuse or mislead the investor. Here we should remind ourselves again that every investor's error is a loss not only to him but to the whole economy out of which the various offerings arise. Unfortunately in the past, security vendors no more than salesmen elsewhere have conceived of their role in sufficiently ideal terms, viz. that of finding

¹⁵For motives, whether selfish or loyal, that dominate corporate policy, see C. A. Ashley, "Some Aspects of Corporations" (*Essays in Political Economy in Honour of E. J. Urwick*, ed. by H. A. Innis, Toronto, 1938), p. 12.

the best possible securities for investors. Rather they have practised—especially in the decade following the war—the arts of high pressure salesmanship, carrying their limited offerings to their public and with little assumption of responsibility of investigating the true possibilities of gain or loss have proceeded to push their sale. Inasmuch as business is business, and corporations require funds and salesmen commissions, it is mostly impractical to revile these groups for their shortcomings. Although they have been instrumental in causing immense losses to investors and to society, their methods and philosophy are of the same piece with millions of others who have something to sell. It is more to the point to assert that our laws have been too loose and quite inadequate for the protection of investors.¹⁶ Many of our remarks in Chapter v pertaining to the hapless consumer apply with full force to the investor. In the great variety of securities associated with post-war corporate financing, he is confused and lost. With old lines disappearing, he has no clear-cut definition of the new types of securities. He does not understand the implications of no-par value shares and the distribution of paid-in surplus. He tends to accept too readily at face value the statements of appraisal companies employed to estimate property.

Looking to Improvement.—It is beyond our field to attempt any detailed programme of remedy for corporate abuses. The student will find an abundance of suggestions in the increasing flow of specialized literature devoted to that purpose.¹⁷ It will be sufficient for us to indicate more or less in outline what some of the foremost writers on the subject are recommending.

1. Looking to higher standards in corporation laws there should be substantial uniformity of legislative requirements throughout Canada either through making incorporation a subject of exclusive federal jurisdiction or through the provinces and Dominion, acting in conference, bringing their laws into conformity. As it stands there are in Canada nineteen separate acts, nine governing sales of securities and ten the conditions of corporation chartering. With many jurisdictions it is impossible for one to advance its standards much in advance of others since any group considering incorporation is free to take out its charter under any one of them, regardless of where it is expecting to carry on its chief operations.

¹⁶The Dominion Companies Act was greatly improved in 1935 with respect to those matters. See sections 74-8.

¹⁷See, for instance, summary of recommendations in *Report of the Royal Commission on Price Spreads*, pp. xviii-xix.

2. The unreality of directors *representing* stockholders in large corporations should be recognized. They should be treated rather as trustees of the stockholders' interest and accorded that standing in law.

3. More responsibility should be placed upon the public authorities granting charters for guarding against gross over-capitalization and for weighing the true merits of an application for incorporation in terms of the people's interest.¹⁸

4. Further instruction of the investor should be sought by requiring simple straightforward presentation of what is vital in prospectuses. Stock vendors should be competent people responsible for their conduct to public authority and preferably living on some basis other than through commissions on their sales.

5. All speculation in the securities of a corporation should be forbidden to its directors. While it is essential probably that they should hold shares in the company, they should not be seeking financial gain through buying and selling activities. One way of checking this would be to require that all such transactions involving directors on personal account should be made a matter of special record for submission at stockholders' meetings. There is little heard in England or Germany of directors making money thus out of their own corporations. There are no banking houses, as one American has said, that name the directorate, "control the policies, buy from the companies the securities thus controlled at prices fixed by themselves, sell them at a profit to themselves and then solemnly move resolution to ratify what they have done."¹⁹

6. Criticism of corporation law in Canada should be directed probably not so much toward the quality of the legislation as written as toward the failure of the various laws to provide adequate social machinery for their enforcement. In contrast with Great Britain, where a Registrar of Joint Stock Companies is charged with the responsibility of receiving initial and annual reports from all companies and of initiating action against any who fail to measure up to requirements of the law, in Canada it is left to the shareholders to appeal to the Secretary of State or the courts to enforce the Acts. Constructive remedy to make good this lack would be in line with responsible administrative emphasis now being featured in other fields of Government regulation.

¹⁸Mention should be made of the Ontario Securities' Commission which controls sale of securities in the province and has on occasion prevented issues.

¹⁹Address by Samuel Untermeyer.

CHAPTER XI

FORMS OF ENTREPRENEURSHIP—(Continued)

CO-OPERATION

CO-OPERATIVE enterprise is organized sometimes from the consumers' end and sometimes from the producers'. Although the same ideal is present in the two cases the point of reference is different. It has been said that co-operative enterprise rejects private profit as a motivating force and that this makes the chief distinction between it and the capitalistic order. The manner of accomplishing this in the two types is so different, however, and the whole approach to organization so dissimilar that we shall do well to give them separate treatment.

(a) **Consumers' Co-operation.**—The beginnings of consumers' co-operation are found where a group of people form a society to buy goods directly from a wholesaler without the intervention of any retail merchant. The money necessary for first purchases of goods is obtained through sale of membership shares. Frequently, this is supplemented by borrowing from the members, by selling additional shares, or through receiving deposits from them. The additional shares, however, give the members that purchase them no extra voice in the control of the society. Like all other shares they anticipate a definite dividend rate but do not put the society in a debtor position. From the standpoint of the society they are different from debit instruments in that they are held by members of the society whose interest in the latter is closer and more intimate than is ordinarily the case with creditors. It is of the essence of the consumers' co-operative principle that large gains shall not be sought through investment. There is nothing of the appeal for funds through offering a variety of securities with different possibilities of return as in the case of the corporation. There are no "plums" for promoters and insiders. The first shares carrying rights to membership are exactly like the others in their investment possibilities. They have the same fixed interest rates. Needless to say, this eliminates speculation. The shares, furthermore, are not transferable. Since shareholding means membership, it is provided

that shares outstanding may be disposed of only through passing them back to the society, which, when it shall have resold them to persons satisfactory to it, recoups the former holders in due course.

Once underway the society plans to get funds for future purchases through sales of earlier goods in the regular course of business. Co-operatives, in fact, more than other forms of business organization expect to grow from within through surplus accounting (or, as they express it, through application of "savings"). Their usual habit is to sell at the regular market prices and since they operate on low costs they plan to come into possession of a large margin. This they look upon as belonging to the members, and held for them in proportion to the amount of goods each member has purchased. Every three months the cost of operation is deducted from gross returns to find what refund is possible to each member as his *pro rata* share of the society's "savings." To the degree that goods have been sold to outsiders these "patronage refunds" to members are increased. It remains with the members themselves, however, to determine in quarterly meeting how much of the savings of last quarter is to go back into the business, and how much is to be distributed.¹

Co-operation is praised by its followers for keeping the membership in closer association with the actual operations than corporate organization. A member buyer at a co-operative store is really concerned with the manner in which the business is conducted. The manner of organization is well calculated to harness his interest. Members are encouraged to participate through the system of committees. In well-organized societies separate committees exist for education (including functional advertising), goods selection, labour, and, most important, management. Service on any of the first three may lead to the promotion of a member to the management committee. Co-operatives, it should be noted, do not supplant wage labour. Like other business, they depend largely upon it, paying wages usually somewhat above the market for lower salaried types but limiting the remuneration of higher executives.

¹Co-operatives, it should be said, do not always sell at the market prices. Sometimes they sell above the market in which case refunds may run as high as 15 to 20 per cent. Here the co-operative is viewed as a method of family savings. In other cases, and more frequently, they sell a bit below market in order to increase sales. The average patronage refund in England is about 8 per cent. See Jacob Baker, *Cooperative Enterprise* (New York, 1937), p. 108. Consult also C. R. Fay, *Cooperation at Home and Abroad* (2 vols., London, 1908, 1939).

Consumers' co-operation does not stop with the retail function. It reaches back to wholesaling and even to manufacturing and primary production. Wholesale organization is usually on a national basis. The Cooperative Wholesale Society of Great Britain dates back to 1864. It bears the same relation to the local consumers' societies as these do to their members. That is to say, each consumers' society has one vote in the control of its policies but each society shares its profits in proportion to the amount purchased. Wholesale societies, as far as possible, buy directly from producers, processors, and manufacturers, buying in bulk and doing their own packaging. When it becomes large enough, i.e. when it has enough member societies, it takes up the processing or manufacturing of its own goods. European societies thus manufacture, among other wares, flour, jams and preserves, meat products, chocolate, soap, clothing, bicycles, and furniture. They also grow and process tea and coffee. The English society operates its own ships in oversea transportation.² Wholesale co-operatives, once well established, frequently take the initiative in adding to their membership by establishing new consumers' societies in areas not acquainted with the idea.

It is interesting to picture an economic order based on the principle of consumers' co-operation. So long as it applies only to the retailing, its deviation from the present order, while important, can scarcely be considered fundamental. But when it reaches back through wholesaling into the fabrication and genetic processes the change is deep-seated. Whatever price policy may be followed, there will be no profits running with investment. All gains come back to consumers in proportion to the amount they buy. In the last analysis it amounts to consumption at cost of labour and capital. Control, however, follows a different principle. While it does not run with investment, neither does it associate with amount of goods consumed. It aims to be democratic—one member, one vote, regardless of shares owned or goods purchased. The same principle holds in the control of the wholesale and manufacturing enterprises. All members, furthermore, are encouraged to participate in the governing activities. Like all democracies, however, the participation weakens as the constituency gets larger and especially as it

²Baker, *Cooperative Enterprise*, p. 87. The English and Scottish wholesale societies employ today nearly 60,000 people. Of their sales 40 per cent are of goods produced in their own factories. The whole Rochdale Movement of Great Britain employs 200,000 workers.

develops complexity at the point where the local societies themselves become the members of the wholesale organization. As regards relations with employees, while there would seem to be no longer much reason for opposition between capital investors and workers, or between entrepreneurs and workers, there would still be a sharp diversity of interest between consumers and workers.

(b) **Producers' Co-operation.**—Producers' co-operation is to be distinguished from organization of production by consumers' co-operatives as presented above. Producers' co-operation is found where the workers take over the management and ownership of an enterprise and conduct it on their own account, or where a group of working men initiate an undertaking of their own. Well-known examples are found in printing, shoe manufacturing, and clothing. Here all surpluses from sales are divided among the member workers. The challenge to the capitalistic order of production is complete. Not to man as owner nor to man as consumer do the gains come but to man as worker. Control, likewise, is democratic, resting with the whole group of workers. This type of co-operation, however, though comparatively old, has not made headway. It is not a good arrangement for gathering capital and it tends to discount the importance of expert management. Its promise of future development looks doubtful.

Co-operative associations for selling only, such as the citrus fruit growers' associations of the United States, are in one sense producers' co-operatives but mainly they are not.³ While they co-operate for the one purpose, or combine it often with buying, or extend supervision back over the productive process, their members are private enterprisers, and neither the control of association policy nor distribution of surplus follows the democratic principle.

Co-operative organization, both producers' and consumers', is favoured above private and corporate enterprise especially for its more just and equitable distribution of the gains of industry, and for the higher moral ground on which it bases. Recently, consumers' co-operation is being put forward, however, as a more capable and dependable system of production than our corporate capitalism. This is evidenced, its promoters assert, by its great gains in Europe, especially during the depression. While no such progress has at-

³See D. F. Blankertz, *Marketing Co-operatives* (New York, 1940); J. E. Lattimer, "Recent Developments in Co-operative Marketing" (*Canadian Marketing Problems*, ed. by H. R. Kemp, Toronto, 1939, pp. 112 ff.).

tended its experience on this continent, it has, nevertheless, met with local success in different parts of the United States and in Nova Scotia and Quebec. As a system of production it seems to offer economies in advertising, greater stability in demand and hence in productive operation, some advantages in borrowing capital, and above all, greater loyalty in those who give their energies to it. Some people think it goes a long way in giving the answer to the question, "How can industry be made to serve more adequately the real desires of the people?"

The future may find it encroaching still farther on capitalism.

GOVERNMENT AS ENTERPRISER

Areas of Government Enterprise.—Government enterprise is interesting on account of (1) its encroachment upon the area of private industry during the past half century, and (2) the changed and changing circumstances and outlook that are contributing to its increase. At an earlier period the reasons for productive undertakings, by European governments especially, were largely political and military. Thus the government operation of telephone and telegraph communication on that continent as well as of railways was largely explained. In new countries mingled with these motives in varying degree was the desire to accelerate the opening up of inland resources. The Intercolonial Railway linking Nova Scotia and New Brunswick with the rest of Canada was a condition of Confederation in 1867, and similar considerations of development and politics attended the projection of Australian railroads. But today along with the persistence of these a new set of motives would have to be consulted to explain the widening range of government enterprise. During the past century there has been increasing concern about the provision of essential services such as represented by roads, post-offices, and schools, which if left to private industry would be scantily and unsatisfactorily done. Prominent in some cases is the idea of safeguarding resources and capturing their benefits for the masses of the people as they become increasingly important. Examples of this are government forest preserves and parks, and hydro-electric development. In others, notably with many of our local public utilities, a chief motive is guarding the citizens as consumers against private monopolies. In some instances jobs are too big or returns too remote for private enterprise, as with the construction of the Panama Canal. But looming large in recent developments is the

idea of the provision of new essential services frequently involving co-ordination and control of present economic activities, that otherwise would not be forthcoming. Thus we have the Bank of Canada, the Federal Land Banks, the Federal Intermediate Credit Banks of the United States, the Ports of New York and London Authorities created to plan, in their respective areas, for the general development and operation and improvement of harbour facilities, bridges, tunnels, etc., the Central Electricity Board established by the British Parliament in 1926 to co-ordinate and increase the efficiency of electrical generation and transmission for the United Kingdom, and the Tennessee Valley Authority whose purpose is *inter alia* to operate dams for flood control and assistance to navigation and to serve as a yard-stick for prices in the sale of electric power by private utility companies.⁴

Some cases there are again where government has not engaged in industry as a matter of free choice, but where private enterprise, incapable of carrying on further, has left the unwelcome burden on the government's doorstep. The Canadian Government during the war, confronted with the choice of continuing financial aid to a number of private railway companies, or allowing them to fail, or taking them over, chose the last alternative.

The New Basis of Operation.—Significant in twentieth-century development of public enterprise has been the invention of new methods of management and control. In the nineteenth century government industry for the most part was operated as an integral part of political government. The Intercolonial Railway in Canada was a direct responsibility of the Department of Railways and Canals even as the post office still is the direct task of a federal department with its own cabinet minister. Under such an arrangement too heavy a strain was laid upon the unspecialized and unrestrained democratic functioning. Industry does not lend itself to democratic operation, especially where its central purpose may be twisted for the enrichment of particular interests among the citizens. Direct departmental operation is generally inadequate because (1) responsible ministers are likely to be men of political rather than business capacity; (2) they are too close and under too much obligation to the people who have supported them; and (3) there is a tradition in most of our young democracies that government industry is a legitimate agency for patronage and that through it "party

⁴See J. Thurston, *Government Proprietary Corporations in the English-speaking Countries* (Cambridge, 1937), chap. 1.

men" may find their reward for faithful service rendered. As a commentator with first-hand experience in Australia puts it, "I lay the blame for the failure . . . of state socialism directly on the politician, and ultimately on the average citizen. His citizenship is not quite good enough for it. He does not elect sufficiently enlightened leaders, and is not a sufficiently magnanimous follower."⁵

The new instrument which seeks to overcome these difficulties is the government proprietary corporation set up with or without actual capital stock under a charter of clearly defined purposes and directed by a board appointed usually by government and responsible for its successful operation chiefly to the latter. Funds may be provided in the first instance by a straight government loan or by sale of bonds of the new corporation to the public and guaranteed by the government. Thereafter it may well be left to meet its own financial requirements through the use of bond sales, or through surplus account like any private corporation. The Hydro-Electric Power Commission of Ontario is a creation of the provincial Government; its first funds were provided by loans made by the latter and secured by a lien on the property of the municipalities entering the scheme; subsequently its capital has been raised by the use of the province's credit upon the approval of the Commission's plans by the Government. The Commission of three members is appointed by the Ontario Government and in theory acts independently of the latter in the capacity of trustee for the properties. This Ontario Company is without capital stock. The Canadian National Railway Company, on the other hand, has outstanding stock which is almost entirely owned by the Dominion Government, and the same is true of the Bank of Canada of which also a majority interest rests in government hands. Some government proprietary corporations which are in part owned by private interests through outstanding stock make provision for representation on the board for such interests. Others again, like the Port of London Authority, while having no stock, make use of a mixed board representing government, workers, and various consuming groups.

The Proper Scope of Public Enterprise.—It was the opinion of the late Dr. A. T. Hadley of Yale University—a view widely held in Anglo-Saxon countries—that distinction should be made between two types of industry, the one routine or standardized and the other progressive, of which the former is capable of government operation whereas the other is not. Standardized industries are such as the

⁵F. W. Eggleston, *State Socialism in Victoria* (London, 1932), p. ix.

post office, telegraph, and waterworks. In general they are characterized by simplicity of operation; they represent a definite capital investment and their depreciation is easy to calculate; they call for no radical changes of method and no scrapping of plant before it is worn out; their money returns are regular and certain. With a progressive industry, on the other hand, success is not dependent on routine; new inventions and methods are vital; costly experimentation is called for; delay in scrapping obsolescent machines may be fatal; the capital investment is indefinite and depreciation allowance hard to calculate. A government administration will be reluctant to substitute new methods for old, especially when they are expensive and their returns will not show until after its successors come into power. For the same reason it will be hesitant, in its concern for making a good fiscal showing, to write down sufficiently its decaying assets. Beyond that it will always lack energy, courage, and imagination.

The question may be raised whether this opinion—if true of the past—should not be reconsidered in view of the new method of organization of government enterprise, and if so, at what points, and to what extent. There appears no good reason why a well-selected board and management should not do as well for a public corporation as a similar board reporting to private stockholders. The *Report of the Royal Commission to Inquire into Railways and Transportation in Canada* (1932) found no count against the administration of the Canadian National Railways on the score of hesitancy or lack of courage and initiative. It stated rather that over the nine years preceding, the system had been “energetically administered and had deservedly won approval by its success in welding together the working forces of the separate companies in the consolidated system.” On the contrary, subjected as it was to the competition of the Canadian Pacific Railway Company, it had been over-aggressive in capital expenditures for branch lines, steamship services, hotels, etc.; and Sir Henry Thornton’s defence of his conduct as chief administrator took the form of explaining why he had felt it necessary to improve the road, replace obsolescent rolling stock, and spend money in advertising to create goodwill for his company.⁶ The indictment, if such it may be called, suggested neither inefficiency nor “spoils” but aggressiveness and over-confidence. The record of the new organizations in Britain and the

⁶See letter quoted in F. Hankin and T. W. L. MacDermot, *Recovery by Control* (Toronto, 1933), p. 59.

United States, especially where they have been conceived on the grand scale, appear likewise to have shown energy and capacity, and in the majority of cases no great political corruption.

Problems of Public Corporations.—Considering the matter broadly, there is no apparent problem in finance in connection with the government corporation. Given its early support and its charter of purpose, it should have equal access thereafter to private funds with other organizations. As to *control* there is no reason absolutely why its relation with government should be troublesome, frequent, or onerous. Nevertheless there is the possibility of its being consigned to failure from the beginning, or bedevilled thereafter, by unwise government action. The heart of the matter is, Will government choose directors according to merit? Will it remove them for cause and not for party? Will it give them security of tenure in office but not tenure in inefficiency? Can it exercise effective control without practising interference?

An interesting development affecting the last question is the device adopted in Canada which puts the National Railway Board under the Board of Transport Commissioners (a government-appointed body with regulatory powers over railways and transport generally) so far as rates and service are concerned but keeping location of lines and extensions within the direct purview of government. This serves to place an additional barrier against troublesome interference by private interests, coming through members of Parliament or more directly.

Regarding Economic Policies.—Government enterprises normally do not operate to make profits but to give service to the community. This means they name prices calculated to meet costs and provide for expansion, but no more. Like the co-operative societies they pass the gains along to consumers, though not in the same way. They lower prices or improve the service. To do otherwise and turn over profits to government would be discriminating against their customers in favour of the rest of the citizens. Likewise in their relations with employees it is their policy to deal equitably rather than to drive hard bargains. To favour either the consumer or the citizen at the expense of the worker would be discrimination.

The further question arises, "Should a government corporation attempt to pay off its standing debt?" Some time ago it was said to be the policy of the Hydro-Electric Commission of Ontario to return all the capital it had borrowed up to that time within thirty or forty years. The Toronto Transportation Commission likewise

is following a policy of rapid retirement of debt from current income. It has been argued that this means discriminating in rates against the citizens served today in favour of the people of the future when, through the elimination of interest charges, it will be easy to reduce very considerably the prices of these services. The answer is that policy here should not be different from good financing with private industry. If the enterprise is expanding in line with the constituency's requirements by financing development from surplus, there is probably little point in drastic reduction of original debt. (If the latter is in the form of a straight grant from government it may be well to retire it with bonds of the corporation with or without government guarantee.) But if expansion is not being so financed year by year and large outlays are contemplated in the future, then, in most cases, there is reason to reduce the earlier debt. Yet back of this the answer is that there is no point in charging rates calculated to deprive a future generation from paying its fair share of overhead.

As for the opposite situation, viz. where a government corporation, saddled with past debts or operating a declining industry, is failing to meet expenses out of revenue, the result is loading unfair burdens on future consumers of the service, or—if the government absorbs the deficits—mulcting taxpayers generally in the present and future to bonus the present users of the service.

Another question concerns the utilization of government prestige in borrowing, to get funds for the company, at easier rates either through guarantee of bonds or through direct increase of government debt. Such a policy it may well be appreciated should be used with moderation. While it enables the company to operate at lower costs, if carried to excess it may weaken the government in the favour of the bond market when it comes to borrow on its own account.

CHAPTER XII

CONCENTRATION IN PRODUCTION AND CHANGING COMPETITION

FOR upwards of half a century there has been a decline of the pure and relatively even competition characteristic of the economy of many small entrepreneurs, and a development of other relationships among business firms. Little observation is necessary to reveal how general this development has been outside of agriculture, special service industries like clothing and barbering and sections of retailing, and those areas of manufacturing that require little fixed capital. One strand of this movement (the first in time) has been marked by definite concentration in business strength. The keynote in its methodology has been dominance by a single firm or organized group. The tendency has been to centralize control through a number of firms, heretofore in competition, drawing together, sometimes to the degree of complete union and the loss of identity of the original firms, at other times to the point of attaining essential unity for most business purposes while continuing to maintain separate plants and accounting, in still other instances retaining substantial independence in most matters but working according to a prearranged understanding with respect to the market. As for the method of arriving at these results, in some cases it has come about through a single firm leading the way in the development even to the point of imposing its conditions upon the others. Stronger firms have absorbed weaker ones after having contributed to their weakness through strenuous and, sometimes, unfair competition. In other instances the act of association has developed from a background of mutual agreement.¹ In all cases the corporation as a financial device has lent itself admirably to the purpose of assimilation and expansion. In Canada the big firms in several industries are allied more or less closely with parent organizations in the United States.

This movement toward concentration, when it has gone so far as to amount to dominance of whole industries, and specially where it has developed through combination, has given birth to a number

¹See *supra*, pp. 141-43.

of problems. It is a desirable thing to achieve economies but it is another thing to supplant or seriously restrain competition. This is the problem of concentration as experienced before World War I and the only one recognized by the economists until well through the twenties. We still have it with us. It touches the masses of consumers very directly. Immediately it is also a problem of the condition of lesser competitors. Looking across the market it is a problem of the condition of the smaller producer who must sell his product to the great combine as its raw material, or, if the latter is a middleman, as an article for its merchandising.

With the war and post-war periods came, however, another development alongside the older one, best described by the expression monopolistic competition, which we may distinguish from the above in that there is no combine, either through security holding or merger or even necessarily through agreement of independents. Rather the field is occupied by a few firms each conscious of what others are doing and for reasons of self-advantage they do not practise competition through underselling each others' prices. Their method of striving for the market must be postponed for detailed treatment in Chapter xvi. We mention the phenomenon here because the two movements shade together in the marginal ground of loose organizations where leaders of firms do have mental association of one kind or another, and the effort at social remedy of the conditions developing has not always recognized the distinction.

In this chapter we shall attempt, (1) a brief description of the concentration movement as it has revealed itself on this continent, (2) a statement of the economic problems it has raised, and (3) an account of the endeavours of government to wrestle with these problems. To appreciate the movement in its various phases and strength, it will be necessary to introduce the American experience first.

The Trust Movement: (1) **The Pool.**—Soon after the Civil War, as a result of the opening up of new natural resources and of technological improvements, a number of industries found themselves in a position where plant capacity was running ahead of what the market was capable of absorbing. This was true not only of manufactures but of transportation where railroads found themselves built beyond the requirements of freight traffic as revealed in the slow business period of the seventies and eighties. In industries of heavy overhead investment it is a characteristic under these con-

ditions to sell goods at prices below total cost.² So long as their operating expenses are covered it pays them to sell whether or not the figure is sufficient to meet all fixed charges. This condition of over-developed plant is likely to lead, therefore, to what is called cut-throat competition, particularly among the heavy industries. With this experience at hand, or impending, American producers in such industries were casting about at this time for means of avoiding this disaster. The first formal device developed for this purpose was the *pool*. A number of firms would enter into a written agreement to turn the profits of all their operations into a common fund or pool and to distribute them according to the percentages provided for in the agreement regardless of which one of them filled the actual orders. Or sometimes it was arranged that the territory serviced by all of them should be divided; or, in still other instances, the business to be done was allocated so as to maintain relative proportions. Through all this the semblance of competition was still carried on in dealings with the public. The various firms would make their bids for a contract as if there were no prearrangement but acting all the while in full knowledge of who the lowest bidder was to be. In this way competition was effectually controlled for short periods in several industries. Apart from the railways which indulged largely in the use of the device, famous pools were developed in coal, whiskey, and salt production and in the iron and steel industry.³ The trouble with the pool was that it failed to command the loyalty of its members. Opportunities for larger individual gains, or dissatisfaction with administration, resulted in desertion. Since the pooling agreement was guarded with secrecy, no gesture could be made at legal enforcement without betraying the whole secret.

(2) **The Common Law Trust.**—Some more binding organization was necessary to hold the members in line, in foul weather as well as in fair. Naturally, creative minds turned to the corporate principle of control through security ownership as a more permanent means of compelling united action. Corporate chartering, however, called for state action and no state issued charters for purposes of this nature. Attention turned, therefore, to the common law device of trusteeship. By naming a number of their members as a board of

²See *infra*, chap. xv.

³See H. R. Seager and C. A. Gulick, *Trust and Corporation Problems* (New York, 1929), chap. vii. The pool as described here was made illegal in 1899 in the United States by the Supreme Court.

trustees and turning over a controlling portion of the voting stock of the various concerns to this board in return for trust certificates issued by the latter, they achieved the concentration necessary for united action. This type of organization flourished during the eighties and through it a number of great combinations were able to dominate their respective industries. Through its unity in policy was accomplished without the publicity which accompanied incorporation. Prominent among these trusts was the Standard Oil Company whose trust agreement of 1882 brought together forty corporations and limited partnerships involving 90 per cent of the oil-refining capacity of the country. For a decade it enjoyed unified and successful operation. The time came, however, when the trust went into the discard through the courts finding it an illegal extension of the common law principle of trusteeship. The trust in the legal sense thus came to an end though the term *trust* continued to be used in a generic way to apply to the whole combination movement down into the 1920's.

(3) **The Holding Company.**—Headed off from further use of this common law instrument, the interests seeking concentrated control turned again to the more direct use of the corporate device. The State of New Jersey came to their assistance by making it possible to charter a corporation with the express purpose of holding the stock of other corporations. By issuing shares of its own and exchanging them for shares of the member companies, such a corporation was able to accomplish the same result as the earlier trust and to operate in full view and with the assistance of statute law. The holding company, as we have stated in a previous chapter, has continued to serve as an effective instrument of centralized control over industrial policy in Canada as well as in the United States.

(4) **The Super-Corporation.**—Along with the development of the holding company, there has proceeded the movement toward more complete unity through mergers and amalgamations. Here the constituent companies give up their charters and lose their identity as business units though a degree of separate accounting of the member units may be maintained if desired. These super-corporations usually grow still larger through purchasing the plants of smaller competing organizations or securing control over them through acquiring a sufficient quantity of their voting shares. What we often find, therefore, when we come to analyse the set-up of one of these giant combinations, is a mixture of super-corporation and

holding company—of unity partly through operating control and partly through policy control.

Before proceeding further with the description of other forms through which combination has gone forward in our own day, it will serve our purpose to look at a few examples of combinations of this older type with whose names we are all familiar.

Canada Packers Limited, organized as a holding company to integrate operations of four predecessor Companies, changed to an operating company in 1935. It now operates 9 meat packing plants in Canada, and one in the United States. It maintains 24 distributing branches, 16 creameries, 6 vegetable canning plants, 2 tanneries, a wool plant, a soap works, a number of cold storages, fertilizer plants, feed mills, egg stations, etc. Its sales for the year ending March, 1947, were \$204,068,650.⁴ The company, according to its own estimates, processes about 30% of the livestock killed under inspection in Canada, or from 15% to 18% of the total.

The Imperial Tobacco Company of Canada, Ltd., is accountable with its six subsidiaries for 75 per cent of tobacco manufacture in Canada and operates a number of wholesale distributing companies, three companies handling tobacco leaf, and United Cigar Stores, Ltd., with retail tobacco stores from Quebec to British Columbia. Its profits since 1930 have averaged close to 12 per cent on its whole capitalization of \$55,000,000 in addition to undivided distribution to its subsidiaries. It rates as a holding company largely, though operating some subsidiaries, and is itself connected through stock ownership with the British American Tobacco Company and the Imperial Tobacco Company of Great Britain and Ireland, the first of which has large holdings also in the United States.⁵

The Dominion Textiles Company, Ltd., leading producer of primary cottons, has an interesting record of stock acquisitions, purchases, and amalgamations. Altogether it represents the bringing together across a period of half a century of no less than eighteen separate companies, the majority of which, though not all, previously operated as competitors. In 1922 the old Dominion Textile Company itself went through reorganization. Though featuring the absorption of eighteen established concerns at one time or another

⁴This figure covers other products as well as packinghouse.

⁵From *Investigation into an Alleged Combine in the Distribution of Tobacco Products in the Province of Alberta and Elsewhere in Canada: Report of Commissioner* (Ottawa, 1938), p. 6.

in its experience, it now operates only eight plants. The rest have been sold or closed.⁶ For a decade it has exerted effective control over Montreal Cottons Company, Ltd., of Valleyfield, P.Q.

The classic example of power through combination and perhaps the supreme illustration of the holding company-supercorporation complex is the United States Steel Corporation. Until 1898, when the era of consolidation began in steel, the industry was distributed among numerous concerns in sharp competition except where modified by temporary pools and agreements. But at this time came a procession of mergers limiting the number of companies in both the primary and the secondary fields, to be followed almost immediately by a movement toward integration, the secondary concerns heretofore engaged in producing tubes, rails, wire, etc., reaching back toward the ore, and the great primary firms like the Carnegie Company reaching forward into the manufacture of the finished products. In view of the impending duplication and battle for markets, there was a rush for acquisition of lake ores and coking coal vital to the success of every company aiming at self-sufficiency, and by 1900 these were mostly concentrated in the hands of less than a dozen concerns. Sensing the nature of the competition ahead which must have been costly to all and fatal to some, and encouraged by financiers interested in the promising prospect of security issues, the leaders organized and set up "with amazing swiftness" in the spring of 1901 this great holding company with a capitalization of \$1,402,000.00, to own the controlling stock of many firms—themselves the result of mergers—and thus eliminate competition among them. At the outset it "controlled about two-thirds of the country's production of crude steel and from one-half to four-fifths of the principal rolled steel products. It comprised ore, coal, limestone, natural gas, railway and steamship companies, blast furnaces, steel works, rolling mills, finishing plants, and various other properties."⁷

The Corporation's ability to dominate the industry and its capacity to overshadow its rivals seemed unquestionable in the early years of the century. In potential efficiency by virtue of location of plant, and equipment, it was believed to be materially stronger

⁶From the *Report of the Royal Commission on the Textile Industry* (Ottawa, 1938), especially pp. 32-40. For study of concentration in Canadian banking see Victor Ross, *A History of the Canadian Bank of Commerce* (2 vols., Toronto, 1920, 1922); and B. H. Beckhart, *The Banking System of Canada* (New York, 1929).

⁷See *Report of the Commissioner of Corporations on the Steel Industry*, 1911 quoted in L. C. Marshall, C. W. Wright, and J. A. Field (eds.), *Materials for the Study of Elementary Economics* (Chicago, 1923).

than even the above figure would suggest. In ownership of railroads for handling its materials, in its control over the best qualities of coking coal, and especially in its command over the resources in the Great Lakes area, it was in a class by itself. Centring its attention on the importance of raw materials, it sought to strengthen its position by using its capital in the lease of ore lands rather than on outright purchase. In this way it was able to control the exploitation of larger areas with a given capital investment.⁸

Extent and Economic Evaluation of the Combination Movement.—The extent of this movement toward centralization through the use of the formal devices just described is hard to appreciate. Between 1887 and 1900 it is said there were 235 combinations formed in the United States with a total capitalization of approximately 5½ billion dollars. From 1900 to 1904 there were 127 more, including such outstanding representatives as the United States Steel Corporation, the International Harvester Company, and the International Nickel Company.⁹ Owing partly to business conditions and in some measure to public opinion and government prosecution of suits against certain of them, the movement was checked thereafter for a couple of decades. During World War I, however, there developed a new attitude toward combines along with an appreciation of their usefulness for certain purposes, and as the twenties wore on a new impetus was given to industrial consolidation. The years 1928 and 1929 broke all previous records in num-

⁸In spite of all this advantage, it has not maintained its proportion in the nation's output of steel, though it has continued to increase its production absolutely. While in pig iron it maintained its percentage for a decade, in steel both crude and finished it lost ground. From 66 per cent of steel ingots and castings in 1901 it dropped to 54 per cent in 1910 and to 30 per cent in 1931. Rolled steel products also showed a steady loss, dropping from 51 per cent at the beginning to 34 per cent in 1931. With rails the showing has been somewhat better. The reasons for this relative decline are to be found in a number of circumstances. The hold upon the essential raw materials was difficult to maintain. Lake ores in particular came to be challenged by others. The great corporation again was found to be less versatile in periods of depression. But probably the chief reason lay in the policies of the corporation itself wherein it has sought to temper competition in the industry rather than destroy it. The maintenance of a steady price in steel rails, for instance, with competitors charging the same was thought to be more profitable than a series of price wars. Furthermore, it made the corporation less likely to condemnation as a monopoly. See Seager and Gulick, *Trust and Corporation Problems*, pp. 224 ff.

⁹See R. T. Bye and W. H. Hewett, *Applied Economics* (New York, 1928), p. 94.

bers of concerns entering into mergers.¹⁰ After this the movement again subsided with the depression. In Canada the movement, though later in starting, has followed somewhat the same pattern. About seventy consolidations took place between 1900 and 1914, most of them during the prosperous years 1909-12; and of the 290 carried through after the war the great majority belong to the period 1925-30. Of the \$192,231,000 total issue of securities during 1921-33 \$170,000,000 were brought out in the three years 1927-9.¹¹

On balance these great consolidation surges have probably resulted in economic loss. By no means all of the early record is suggestive of cumulative business advance. Many of the early trusts failed and the history is spotted with accounts of liquidation. As for the immoderate promotions of the late 1920's, the great majority failed to pay dividends on the preferred stock in the decade following. Almost without exception the realized earnings never approached the estimates and many firms failed outright. Business failures usually mean economic loss inasmuch as they represent misdirection of resources and subsequent financial demoralization and loss of confidence. The economic effects where the combines did succeed were not all favourable.

Reasons for the Development of Combines.—The explanation of the rapid growth of industrial combines is found in a number of causes, and among these different investigators lay the emphasis in different proportion. First has been the desire to escape the cut-throat competition which seems to have forced itself upon many industries when new discoveries and processes resulted in production capacity outrunning markets. This condition has been repeated at various times, and it is doubtless true that in numerous instances the situation has been saved through merger or by getting security control over the marketing policies of lesser competitors. Actual failure of weak firms and absorption by survivors has frequently been featured in the methodology.

It is easy, however, to over-emphasize the evils of cut-throat competition and to set it off from the healthful. The hope of securing monopoly profits through maintenance of price after troublesome competitors had been drawn into the combine, has been a leading reason in a great many cases. Evidence of this is found in the fact that many of the lustiest consolidations took place not in depressions when competitive profits were falling but in prosperous seasons. It

¹⁰See W. L. Thorp, "Persistence of the Merger Movement" (*American Economic Review*, supplement, 1931, p. 78).

¹¹*Report of the Royal Commission on Price Spreads*, pp. 28-31.

is seen also in the practice of capitalizing the trusts in figures well above the capitalization of the constituent companies, which was carried on apparently in the anticipation of greatly increased earning power. It is rather evident that with concerns like the American and the Imperial Tobacco Companies and the United States Steel Corporation this was the first reason. On the other hand, when an industry, victimized perhaps by an unforeseeable shrinkage in the demand for its product, finds itself greatly overdeveloped and badly disorganized in competition, like the Canadian newsprint industry, it may be economically defensible to have it arrange for an orderly distribution of the loss through some kind of organization.¹²

A third reason, emphasized by those who have favoured the combines, is the desire to extend the large-scale production methods to the greatest possible limits and thus secure the fullest economies in production. The argument already set forth in Chapter IX concerning the advantage of the large-scale business unit over the small may be projected farther. While not contending for increased plant economies, it is pointed out that the advance to the trust allows economies through a reduction in the costs of competitive advertising, handier access to raw materials and markets and thus avoidance of cross freight charges, a better adjustment of the stages of integration and elimination of marketing costs as between these stages, a higher degree of specialization among plants, a readier and cheaper access to capital, and better facilities for research and for becoming acquainted with the possibilities that lie in new and supplementary products. These possibilities doubtless have loomed large in the minds of many of those who have led their firms into membership in combines while little attention has been paid to the losses due to waste, impersonality, and rigidity that should have been set against them.

A fourth reason has been the desire to obtain the profits of promotion. It has been stated that Mr. Havemeyer received ten million dollars in common stock for financing the promotion of the Sugar Trust and it is on record that J. P. Morgan as banker made a scoop of \$86,000,000 in cash in addition to a block of common stock for his part in promoting the United States Steel Corporation. Promoters' profits, it is true, did not always materialize but when they did the reward was rich. Professor W. L. Thorp, referring especially

¹²See John A. Guthrie, *The Newsprint Paper Industry* (Cambridge, 1941). See also V. W. Bladen, *An Introduction to Political Economy* (Toronto, 1941) chap. vi.

to the more recent movement, pictures the investment banker at the centre. He declares that "During 1928 and 1929 some investment houses employed men on commission who did nothing but search for potential mergers. Mergers consequently follow the curve of prosperity and depression running to large numbers when new securities will sell on a buoyant market and when price control of commodities will mean the possibility of good profits."¹³

In general it may be asserted that market considerations and the expectation of some degree of control over price either in selling or in buying, or in both, have been more important than considerations of industrial economies in causing the trust movement. Anismus has been given to the movement, particularly in the present century, by the lure of promoters' profits. In some instances, particularly those involving industrial consolidations, large-scale economies have been prominent; in others, notably the pools and later forms of combination devoted pretty much entirely to marketing control—examples of which we have yet to describe—such economies are mostly absent.

Recent Looser Forms of Combination.—We pass now to an examination of looser forms of organization which encroach less on the individualities of the firms engaging in the union and which offer no challenge to their continuing identities. One of these is the *marketing co-operative society* which, in some respects, is like the early pool. Each producer entering into it agrees to market his output through the central office, or, if he fails to do so, to pay a penalty for each unit of output sold outside. These organizations are usually concerned with dealings with distant and important consumers' markets whose continued patronage is vital to the whole group of producers. They are, therefore, concerned with educating their members in the production of standard goods and with providing grading and inspection, as well as with the problem of immediate selling. In some instances they assist also with financing, effecting part payment for goods long in advance of actual receipts from sales. Unlike the earlier pools they are open and above board. While they do not seek to control price through limiting output, they have in some cases sought to affect it through temporarily holding back the supply. Examples of this form of organization are the California Fruit Growers' Association and the late Wheat Pool of Western Canada.¹⁴

¹³Thorp, "Persistence of the Merger Movement," pp. 87-9.

¹⁴For further description of the latter, see Harold Patton, *Grain Growers' Co-operation in Western Canada* (Cambridge, 1928).

More important by reason of numbers at least and also more subject to criticism is the form known as the *trade association*. Of these there were estimated to be at least a thousand in the United States in the late 1920's. Proportionally, there are not nearly so many in Canada. The membership of a trade association consists of manufacturers and of jobbers, of wholesalers or of retailers, and sometimes of combinations of these groups, but, in contrast with a general manufacturers' association or chamber of commerce, is confined to a single industry. Examples are the Canadian Rubber Footwear Manufacturers' Association and the American Iron and Steel Institute. Trade associations in the United States date back to 1870. At that time their chief object was enhancement of prices by restriction of output or other devices. Like the pools, their operations were secretive and their duration brief. Toward the end of the century they began to function more broadly and constructively with presumably less emphasis upon restriction. By 1911, under the descriptive title of "open-price" associations, they served to provide a medium for the exchange of various items of business information among the members of a given industry by means of which they might arrive "at an intimate acquaintance with competitive conditions as they exist among themselves and in the whole industry."¹⁵ Their sponsors and apologists defended the ideal of intelligent competition via mutual knowledge in place of uninformed competition. To this end the trade associations developed tactics somewhat as follows: They proceeded to standardize the cost accounting of their members and to present to each other through the central office figures of their actual costs, prices, production, stocks on hand, orders in hand, shipments, etc.; they supported each other in a common effort in industrial and commercial research; also in carrying on productive advertising and in standardizing and simplifying processes and products; they published trade journals calculated to inform the members. Among these activities the most useful and at the same time often the most dangerous has been the exchange of statistics. Figures of costs and prices in particular, unless offered in a careful manner, slip over easily from providing the means for more rational competition to eliminating price competition altogether.

Alternately condemned or fostered by the American governments, in accordance with whether their price-exchanging activities or their constructive activities were emphasized, they were finally

¹⁵Seager and Gulick, *Trust and Corporation Problems*, p. 305.

adopted as the agency for the administration of federal Government policy in serving as the basic machinery for code development and enforcement under the N.R.A.¹⁶ With the overthrow of the latter at the hands of the Supreme Court, this condition of security passed and they are again open to prosecutions. One lesson from the N.R.A. experience is that self-government by industrial groups is not safe. The future place of trade associations in the economy of both Canada and the United States is uncertain.

Informal Arrangements.—Less formal than trade associations are various other devices which have played their part at different times in the period under review and some of which today are very significant. Thus "gentlemen's agreements" operating without written evidence were prominent in the years following the Civil War and doubtless have retained a place throughout. Several important industries, again without any formal trade association, indulge in the practice of "following the leader" in significant matters, especially with respect to price. The leader, frequently the largest company in the industry, makes known its intentions of policy in a speech of its chief executive, perhaps, or, again, through an article in the trade paper. The other executives, recognizing their cue, fall into line.¹⁷ Other industries again, without actually organizing into pools, practise a thoroughgoing sharing of the market. The "big four" packers of Chicago, for instance, have shown little variation across a period of years in their relative proportions of the total American market for different meats.¹⁸ In the refining of gasoline in Canada, the three Canadian companies are said to have maintained their regular proportion of the business throughout the 1920's though the Imperial Oil Company had capacity to take care of the whole trade by itself. Not the least important of the modern controls over effective competition has been that of the interlocking directorate. A variant of this is the single controlling owner of a number of "competing" companies, as in the recent anthracite coal combine engaged in importing European anthracite into Canada.¹⁹

This phenomenon of a limited number of relatively large firms

¹⁶For this function they were, however, expanded to include representatives of labour and of consumers and their nature was correspondingly modified.

¹⁷For an account of the famous Gary Dinners, see Eliot Jones, *The Trust Problem in the United States* (New York, 1922), pp. 225-30.

¹⁸See A. R. Burns, *The Decline of Competition* (New York, 1936), chap. xx.

¹⁹See *Report of the Royal Commission on Anthracite Coal* (Ottawa, 1937).

continuing to survive in the presence of each other, and persisting largely by virtue of these loose arrangements, whether formal or informal, seems to be the chosen condition of many industries during the last two decades. This, rather than the great industrial trust, using its strength to crowd out weaker competitors, seems to be the order of the day. Even in industries like steel, petroleum, and meat packing, where great dominant concerns do exist, the principle of "live and let live" is the rule of business. The situation presents a vivid contrast to that of the closing decades of last century when the Standard Oil Company, the American Tobacco Company, and others carried on competitive war against all comers with no suggestion of considering their right to a separate existence. These remarks hold true for Canada as well as for the United States in so far as her combines have been industrial trusts.

Abuses of Monopolistic Combination and Concentration.—The reader should not get the impression that all combinations are uneconomic. The earlier stages of combination in an industry are not necessarily monopolistic and may well represent an advance to a more economic-sized unit. And even where the monopoly feature does enter, it is not necessarily true that the combine represents social loss. The record of the monopolistic combines has, nevertheless, been sufficiently spotted. According to their nature and their position in the whole field, the different ones have resorted to different instruments and methods of doubtful social quality. Being driven, furthermore, by government action to cease from certain earlier types of activity, they have been impelled to change to others. The abuses of monopolistic combinations which we are about to analyse have been condemned as being either unfair to other producers or opposed to the interest of consumers. Attention has also been called to their evil effect upon the distribution of wealth and upon the political life of the country.

Railway Rebates.—One of the early abuses through which certain American trusts rose to power was the use of special favours in transportation. The Standard Oil Company, for example, as the greatest offender in this way, received generous rebates from several of the American railways and in some cases so great was its hold over the rail companies it even collected a charge on petroleum carried by them for other oil firms. Furthermore, recognizing the importance of all transportation to the oil industry, it secured early control of most of the important pipe lines conveying crude petroleum from the wells to the points where it was refined. Government

investigation, under the lead of President Theodore Roosevelt, gave publicity to these discriminatory favours by railways and thus denied this form of advantage to the trusts after 1906. The law thereafter also declared operators of pipe lines to be common carriers, which laid upon them the same responsibility of according equal treatment to all shippers.

Price Discrimination.—An American enquiry directed at certain of the trusts at the beginning of the century found evidence of their charging different prices for the same commodity in different places other than variations attributable to transportation costs. At points where competition offered, the practice was to lower the price for such time as was necessary to overcome the competitor, the great company, meanwhile, recouping its losses or the meagreness of its profits from generous margins elsewhere. The late Professor Seager, authoritative American economist in this field, was of the opinion that geographical price discrimination was widespread until dealt with by law. The practice lends itself to arbitrary enhancement of fixed capital investments by the insiders of the trusts involved, as well as to subduing competitors. Discrimination of the type described is now forbidden in both Canada and the United States, but a modern variant, representing more permanency in price differentials (and not intended to eliminate all kinds of competition), is practised by whole industries under what is called the "basing point system." In many industries such as cement, steel, wood, petroleum, the practice, instead of charging prices to consumers everywhere amounting to factory production cost plus transportation, is to divide the country up into areas or zones with uniform delivered prices for each whole area, or, more frequently, to have arbitrary basing points in each area, with transportation from these added to base rates. The base rates themselves may be the same but are more usually arranged on some differentiated scheme satisfactory to the industry.²⁰

Another form of discrimination—discrimination as between customers, according to trade status, rather than between localities—has also been charged. In the investigation by the Dominion Price Spreads Commission, it was brought out, for instance, that both the Canadian Rubber Footwear Manufacturers' Association and the Canadian Rubber Tire Association had systems of differential prices by means of which they graded the firms buying from them largely according to annual volume of goods taken. The Associations in

²⁰See Burns, *The Decline of Competition*, pp. 280-371.

question defended themselves, arguing differences in selling costs corresponding to price differences but their case was not wholly acceptable to the Commission.²¹

Restricting Competitors' Contact with the Market.—A third practice which has probably been widely practised both in Canada and the United States has been that of barring competitors from free access to market. This takes various forms. Looking to the sales market, it usually means contracts with jobbers and dealers which amount to a boycott on the goods of other manufacturers. The International Harvester Company has been looked upon perhaps as the classic example of this kind of activity. During its trial, which lasted over a period of years, it was charged by the Federal Trade Commission with (a) attempting to coerce dealers into agreeing to handle some of its products to the exclusion of similar products of other companies, (b) attempting to force a full line of the International's products on dealers as a concession to their being given the right to carry any of them, and (c) allotting its brands of harvesting machines in such a way as to secure an undue proportion of the dealers in each community as vendors of its goods.²² Similar charges have been levelled against the Imperial Tobacco Company of Canada. Before the Price Spreads Commission it was alleged that "jobbers were compelled to push the distribution of Imperial Tobacco Company products and hinder those of independent manufacturers. Sales of certain of the company's popular brands to dealers were allegedly conditioned on the accompanying purchase of less popular merchandise." The right of large retailers to buy directly from the company instead of indirectly through wholesalers and thus enjoy an advantage of 10 per cent in the purchase price was also said to depend upon the promise "to give Imperial products prominence in display over the goods of other manufacturers."²³

Restricting Competitors' Access to Materials and Services.—Frequently, great companies or combines have sought to disarm competitors by barring them from necessary goods or services. Under this category there have been many variants. The Standard

²¹See *Report of the Royal Commission on Price Spreads*, pp. 73-6. For fuller discussion, see Burns, *The Decline of Competition*, chap. xx. A fourth form of discrimination, viz. according to use made of the commodity as, for instance, different rates for industrial vs. residential uses of electrical current, is not to be classed as an abuse.

²²See Seager and Gulick, *Trust and Corporation Problems*, pp. 272-3. The later record of this company is represented as free from anti-social practices.

²³*Report of the Royal Commission on Price Spreads*, p. 53.

Oil Company, we have seen, sought to deny to its competitors equal services of transportation. The great American Tobacco Company followed a policy of buying up every invention for rolling cigarettes and forthwith putting it out of action before it could fall into the hands of competitors and so enable them to challenge seriously the American Company which was already provided with its own patented machines. The Canadian importers of British anthracite coal, masquerading as a number of companies but really amounting to one, for some time effectually fenced off competition through exclusive contracts with two British organizations which together controlled approximately 90 per cent of Welsh coal production. One of these British concerns, likewise, had until 1936 an exclusive control over the German anthracite available for export. Inasmuch as American anthracite is essentially a different commodity from European anthracite—the two burning to best advantage in different types of furnaces—this exclusive control of access to the European product proved to be a serious matter for the whole of Eastern Canada.²⁴ Again, the Amalgamated Builders' Council, an organization aiming to include all plumbing operatives, together with all jobbers and manufacturers of plumbing products (in Toronto, Hamilton, and Western Ontario) sought not only to make it difficult for individuals or firms outside the combine to acquire materials and to sell products, but aimed, through agreement with the plumbers' union, to interfere with their access to the labour market.²⁵

Generally speaking, it is held that all activities calculated to hold competitors from free access to the market—whether to purchase goods or services or to sell their products—is against the

²⁴*Report of the Royal Commission on Anthracite Coal.*

²⁵Report of Commissioner, Investigation into Amalgamated Builders' Council. One of the latest investigations upon which the Commissioner has reported deals with dental supplies. The report condemns the operation and policies of the Canadian Dental Trade Association, stating that price competition in the sale of all kinds of dental supplies in Canada had been practically eliminated. The Commissioner concluded that all fourteen members of the C.D.T.A. have been privy to "a combination which has operated to the detriment and against the interest of the Canadian public." The report accuses the organization of taking advantage of tariff protection and suppressing competition, by "the establishment of a system of price fixing through a Universal Price Book and otherwise, which results in common prices being charged by all members of the Association." On the basis of this report the Dominion government has instituted proceedings against the C.D.T.A. See Report of Commissioner, *Investigation into an Alleged Combine in the Manufacture and Sale of Dental Supplies in Canada* (Ottawa, 1947).

public interest. Companies should win their way to recognition through the quality of their wares or the merit or method of their offering them rather than through coercive tactics such as those illustrated in the last two paragraphs.

Other Unfair Competitive Policies.—Other charges brought against the combines have had to do with the secretive and hypocritical way in which they offer competition. The American Tobacco Company, for instance, used dummy companies to eliminate rivals. By not showing its hand it averted public condemnation.

Inequality across the Market: (a) **Exploitation of Consumers.**—Most of what we have said thus far has had reference to methods and policies which amount to abuses of the rights of competitors of the combines. Visible in much of it, however, is the implication of the probability and sometimes the certainty of consumers' exploitation. When a great corporation attempts in devious ways to prevent other firms from showing their wares in competition, one reason is that it wants as much of the market as possible for itself, which is true of all competition, but another often is that it hopes by this means to charge higher prices than those that would exist under effective competition. When the hold upon the market amounts to a condition of relatively secure monopoly, as in the case of the anthracite coal combine cited above, this increase in price is even more probable.²⁶ This matter of higher prices due to monopolistic control constitutes the most important reason for the indictment of combines. The case, however, is not always clear. Sometimes the evidence is favourable to the combine. No case lies on this score apparently against the great Dupont interests in chemical products or the Canadian Industries Limited, or the great packers in either country or the mail order houses. Sometimes, on the contrary, it is such as to place the great company under grave suspicion as in the case of the United States Steel group. The Commissioner's *Report*, cited above, commented suggestively upon the too high profit made by the steel corporation during the period of its review. After generous allowance for depreciation and obsolescence, the average rate of profit on actual investment, including the bonds, for the first decade of the century was 12 per cent. "12% profit for one small concern out of many," it said, "is one thing. Other concerns may make much less. It is a very different thing when . . . one-half of the whole industry has been maintained on the level of a 12% pro-

²⁶Price increase, it will be explained later, does not always result from monopoly conditions.

fit."²⁷ In still other instances the matter is put beyond doubt through the discovery of written agreement of price enhancement. Such a case was that of the Proprietary Articles Trade Association agreements which were set up among Canadian druggists and manufacturers and wholesalers of these articles a decade ago. At the time of the government investigation of this organization under the Canadian Combines Investigation Act, it contained 157 manufacturers, 28 wholesale druggists, and 2,732 retail druggists, the latter comprising between 80 and 90 per cent of the retail drug trade of Canada. Although a trade association with wider purposes, its main object was to deal with what it characterized as "the unreasonable and unfair cutting of prices" in these goods by some firms and notably by the chain stores. According to the registrar's report, the following were among the undertakings of the Association in its effort to maintain the regular channels of distribution of these products and to hold up prices in keeping with a fair profit for all:²⁸

1. It is the object of this Association to establish standard margins (33½ per cent for retailers, 16½ per cent for jobbers) on all drug proprietaries.
2. Wholesalers and manufacturers are bound to withhold supplies of all listed articles from any dealer infringing these margins.
3. A reduction in the price of *any* article on the Association's list will result in the withholding of *all* articles on the list.
4. Quantity discounts are to be given but no such saving may be passed on to the public.
5. It is the necessary object of the Association to be all-inclusive so that no manufacturer, wholesaler, or retailer may exist outside of it.
6. There is nothing to indicate that manufacturers cannot sell direct to the retail trade, but no saving so effected may be passed on to the public.
7. There is no provision for a reduction of price for the purpose of reducing stock or clearing out slow-moving goods.

Here there is little evidence of any new economies through association. The units of manufacture and merchandising were not changed. In fact, the *status quo* was supported through stopping the encroachments of new agencies for distributing the products, viz. chain and department stores. Prices to the consumer were made high enough to allow generous profits to wholesalers, retailers, and manufacturers. They were communicated by means of price lists covering 600 articles and enforced upon the members by threat of expulsion. Expulsion from the Association meant for retailers

²⁷For further statement of the effect of trusts on prices, see Jones, *Trust Problem in the United States*, chap. xi.

²⁸Taken from F. A. McGregor, interim report of Department of Labour.

and wholesalers difficulty in obtaining the goods, and for manufacturers and wholesalers similar limitations upon disposing of their products. As the Association increased in membership toward inclusion of the whole trade, as it sought to do, the hardships of the remnant of outsiders mounted in like degree.²⁹

This last recital is suggestive of the dangers that lie in the trade association as a regulatory business form. Competition is at least as susceptible to debasement through such organizations as it is to improvement. Particularly is this true when activities take the form of disseminating price information among competitors. Mutual knowledge of past prices is considered harmless, but for the most part it is unlikely that "lists," and less formal agencies like conferences to discuss market conditions, will not disclose present and future price intentions. Even though there may be no overt penalties for cutting below the rates, it is believed that price competition is largely banished through such understandings. Professor Bladen, writing with particular reference to the set of trade associations that cover the Canadian textile industry, remarks: "There is little doubt that these 'open price' associations . . . are made in the hope and expectation that they will maintain higher prices. By agreeing not to change their prices without due notice [to each other], it is impossible for anyone to secure that advantage which comes to the firm that cuts first, in the period before the others fall in line. This must surely reduce the likelihood of price reductions."³⁰

(b) **Exploitation through Purchase.**—Less discussed than the exploitation of consumers but real enough in some instances has been the advantage taken of producers operating in close competition and largely dependent upon the big company for the sale of their goods. A clear case in point as revealed by the investigation of the Price Spreads Commission was that of the Imperial Tobacco Company of Canada operating as the dominant buyer of

²⁹Conditions almost as oppressive characterize dealers in tobacco who fail to take membership in one of the five associations in Canada and abide by the terms laid down in agreements between these and the Imperial Tobacco Company Ltd. A central object of the tobacco combine has been the naming of resale prices by the Imperial Tobacco Company and thus ensuring high profits for itself and incidentally certain margins for the dealers. The practice rules out price competition among the latter and in a number of ways deserves to be judged as uneconomic. See C. A. Curtis, in *Investigation into an Alleged Combine in the Distribution of Tobacco Products*, p. 53.

³⁰"The Role of Trade Associations in the Determination of Prices" (*Canadian Journal of Economics and Political Science*, vol. IV, May, 1938, p. 225).

the raw tobacco of hundreds of Ontario farmers during the distressful years 1931 and 1932. With a reduced demand from Great Britain and with unprecedented quantities of "raw" offering in the hands of producers, the Imperial Company, with lesser companies accepting its lead, used its great strength to reduce the price of bright flue-cured tobacco from an average of 32 cents in 1930 to 21 cents in 1931 and down to 16 cents in 1932. Evidence submitted showed how the great buyer took advantage of the conditions surrounding the market during both years to depress the price unduly. One device resorted to in 1932 was to delay the opening of the bidding for three weeks beyond the accustomed date for the opening of the market until the growers were in a condition of panic, and thereafter for some time deliberately to slow down buying operations.³¹ Well advertised also by the same investigation were the difficulties of the cattle raisers in confronting the non-competitive buyers of the great companies, and also the cut-throat competition of the small manufacturers as they battled for the orders of the great mail order houses. Concerning the last named, the operating firms producing shoes and textile clothing sought to switch the incidence of their own exploitation back upon their employees by forcing them to work at anti-social wages.

Political and Social Disadvantages.—In some cases, powerful combines have used their advantageous position and their bargaining strength to force hard terms upon their workers. The records of the steel and the meat packing industries in the United States and the textile industry for Canada afford illustrations. Another aspect of the debit count has to do with the manipulation of the country's political policy (and reaching beyond this sometimes playing a secret hand even in more remote international affairs). Such centralization of power makes for political inequality and upsets the balance of legislation. We see it especially in tariff schedules and concessions but also, it is said, in revolutions in backward countries stimulated too often by the great companies whose interests there may be served by challenging the authority of present governments. Other problems have to do with the increase in wealth inequality which goes forward apace with monopoly gains and promoters' profits, with the speculative mentality stimulated by vast issues of stocks and the insecurity associated with the gamble between failure and success of these great overcapitalized concerns.

The Attempt at Public Control.—Briefly, the State's effort at control has been marked by two lines of emphasis which can scarcely

³¹See *Report of the Royal Commission on Price Spreads*, p. 150.

be reconciled. The one would solve the problem by reinstating effective competition; the other would accept the combine and the elements of monopoly or imperfect competition that go with it and rely on government control to ensure the turning at least of part of its economies to the common interest. The United States has vacillated in its policy, at first taking an uncompromising stand for the re-establishment and enforcement of competition but later changing to the second emphasis. Canada has been somewhat more consistent in that she has from the beginning sought to discriminate between good and bad combines, those whose operations were against public policy and those that were not. The mere fact of monopoly has never been a cause for condemnation in Canada. It must be a monopoly operating against the public interest. Once the latter indictment is well pinned onto a combine, however, the way of remedy has usually been sought through an enforced return to competition. A more detailed account of the evolution of public dealing with combines in the two countries is now in order.

Control in the United States.—The inability of the courts to restrain the activities of combines by reference to common law precedent was early demonstrated. Soon the demand was raised for legislation, and in the eighties a flock of statutes from various state congresses was the result. It became evident before long, however, that states were incompetent to give satisfactory protection in this matter. Railways early disregarded state boundaries and industrial corporations and pools carried their operations into a plurality of jurisdictions. In 1887 came the Interstate Commerce Act defining the limits of legality with respect to traffic crossing state boundaries or involving foreign nations, and providing an administrative body, the Interstate Commerce Commission, to carry out and enforce its terms. Three years later came the second federal statute, viz. the *Sherman Anti-trust Act*, intended to cope with the ever-growing problem of industrial trusts and combines. This Act, like many of the state laws preceding it, was an extravagant piece of legislation suggestive of a lack of appreciation of the complexity of the problem and also too naïve a dependence upon public prosecutions before the courts to remedy social evils involving great vested interests. To be specific, it declared that "every contract, combination in the form of trust or otherwise, or conspiracy in restraint of trade or commerce among the several states or with foreign nations" is illegal; and that "every person who shall monopolize or attempt to monopolize, or combine or conspire with any person or persons to monopolize, any part of the trade or commerce among the several states or with foreign nations, shall be guilty of a misdemeanor."

This blanket indictment of monopoly and of every form of combine and contract in restraint of trade, while expressive of the popular attitude of the time, was doubtless too sweeping. Business transactions are permeated with influences calculated to restrain trade at some point or other and even the drawing together of small business folk for mutual helpfulness is likely to have elements of restriction in it.

Machinery, furthermore, was lacking to gather the evidence necessary to incriminate the great trusts against which the law was aimed. For twenty years no successful prosecution was carried through against them, although decisions were handed down against a trade union for its boycotting activities and against a holding company bringing together two competing railways. Sensing the inadequacies of the law to accomplish its intended results, President Roosevelt, in 1903, was instrumental in having created the *Federal Bureau of Corporations* to investigate the organization, conduct, and management of any corporation or combine engaged in interstate operations and "to gather such information and data as will enable the President of the United States to make recommendations to Congress for legislation for the regulation of such commerce." With this instrument for arming the prosecution with data serviceable as evidence, the battle was carried to the big offenders. Decisions were obtained against the Standard Oil Company and the American Tobacco Company in 1911 and their dissolution ordered. The policy of general suppression, however, blithely adopted in 1890, as a means of turning the country back to a condition of self-regulating and satisfactory competition, was coming in for more and more criticism as these investigations and prosecutions proceeded. Students of the period point out how the Supreme Court, in its interpretation of the Act, had moved by 1911 from its earlier literal interpretation as shown by its condemning all combinations that restricted competition, to the position of condemning only those causing *unreasonable* restraint of trade. The "rule of reason" thus read into the law came to take the place of wholesale suppression. Furthermore, during the war, when it became evident that some of the combines were very serviceable in organizing the productive resources of the nation, the court began to ask whether or not it was expedient, in view of the whole situation and considering the matter from the standpoint of the public interest, that a great combine should be dissolved even though evidence was abundant that restraint of trade resulted from its organization. On this score the

United States Steel Corporation was exonerated in 1920 after a lengthy trial. The "rule of reason" thus made way for considerations of "*expediency*" and the combines came to be dealt with according to the social philosophy of the post-war era in spite of the phraseology of the 1890 statute. During the same period public opinion had moved ahead a long way in the direction of tolerance, although most of the time favouring more drastic and rapid action than that shown by the slow-moving court. Factors contributing to this change in attitude of both court and people were (1) the clarification of what constituted illegal practices and the discontinuance of these by the big companies themselves, and (2) the creation of a Federal Trade Commission dedicated to the idea of giving guidance to business in all these matters where the public interest is threatened through unfair methods, and also of assisting Congress to apprehend the offender through investigation and advice wherever violation of the anti-trust acts is alleged. The appointment of this Commission marks a new stage, in fact, in the treatment of trusts in the United States.³² It is primarily an administrative body which, while given responsibilities of regulation, seeks to accomplish its results by prevention rather than by punishment. It is empowered, when convinced that unfair methods are being used and that a proceeding by it would be in the public interest, to serve a complaint, hold a hearing, and order their discontinuance. This failing, it turns not to the Court of Common Law but to the Equity Court for an injunction to restrain their continuance. Its findings as to the facts, if supported by testimony, are, however, conclusive. Again, on its own initiative or at the request of the Attorney-General, it may investigate the manner in which decrees affecting industrial combinations are being carried out. This last responsibility was laid upon it because of the failure of the trusts to fulfil the intent of the court after the latter had ordered their dissolution. Its role in the piece is thus rather complex. In the regulation of combines, while it stands in part as a body supplementary to the courts, sometimes assisting, sometimes following up, it also wields weapons which they cannot. As an adviser to business it pursues its independent course, and the "trade-practice conferences" for discussion and agreement held under its auspices during the twenties with separate industries contributed substantially to the definition and reduction of such forbidden activities as misrepresentation, false

³²Some part of its functioning was anticipated by the earlier Bureau of Corporations.

advertising, secret rebates and commissions, price discrimination, and cutting price below costs. Later it offered individual codes of procedure for a great many industries which unfortunately were not well received.³³ Its members, who number five, serve for a period of seven years. It has played its part in trust control since 1914.

The Clarification of Illegal Practices.—Illegal practices received formal statement in the Clayton Act of 1914, though distinctions of right and wrong were in process of definition years earlier. This Act declared the following to be unlawful: (1) price discriminations in interstate commerce, where no differences in grade, quality, or selling costs are involved; (2) exclusive selling or leasing contracts, which require the dealer not to carry competing goods of other firms; (3) the combining of two or more corporations through stock-ownership and interlocking directorates, providing in each the practice tends to lessen competition, restrain trade, or create monopoly.³⁴

Referring again to the post-war trends we find the United States, in addition to modifying the Sherman Act through court interpretation, reversing itself in a more positive way in some sections of the field. With firms trading to foreign markets it lifted the ban on combination of competitors in order to meet more effectively the competition of other countries. It encouraged railways to gather together in systematized groups provided they acted with the permission and co-operation of the Interstate Commerce Commission. Finally, it became increasingly tolerant and appreciative of trade associations until in 1933, with reliance on government control, it ruled implicitly that every industry must restrict competition in such degree as was necessary to keep in step with the requirements of its code.

We may say *in summary* that the experience of the United States has been one of comparative failure in trying to suppress combines by means of a frontal attack through the courts. More has been accomplished through government working with business indirectly through the medium of the standing Commission, encouraging, correcting, investigating, and restraining and using the courts of equity as a last resort. The matter seems to call for leading strings as well

³³G. M. Modlin and A. MacD. McIsaac, *Social Control of Industry* (Boston, 1938), pp. 197-8.

³⁴The Act also declared individual directors, officers, and agents of corporations who have ordered or authorized acts contrary to the law to be personally liable. Furthermore, to keep the application of the anti-trust laws confined to the field intended, it absolved labour unions and co-operative societies from prosecution under them.

as penalties. Yet there must ever be a consciousness of the strong hand of authority. When this has been lacking the control has weakened. The Commission has not been equally effective at all times. Much has also been achieved in the restraining of business abuses through the forceful language of the anti-trust laws themselves.

The nature of the problem itself has changed over the half century and the nation's conception of it has changed still more. The irresponsible bad actors of the eighties and nineties, playing free and loose in a situation where the lines of competitive legality had not been charted and where ambition knew no limit but the ruthless extermination of competitors, have been followed by leaders reconciled to moderate progress through market sharing, trade association activities, and the practising of imperfect competition. No longer is it a matter of monopolistic exploitation of consumers by the individual company. With this change and with the knowledge of the functioning of the Federal Trade Commission, the extravagant fears of the earlier days have been dissipated and attention centres more on the constructive aspect of improvement of business forms.³⁵

Control in Canada: Dominion Legislation.—Governmental effort at control of combines in Canada, while influenced throughout by the American experience, shows in its more cautious early approach marks of the British tendency and especially the controlling force of the English common law. A Conservative premier argued, in fact, that the purpose of the legislation was chiefly to declare the common law and thus instruct the public concerning what was really the remedy through the courts. The position of the common law reduced to its briefest terms has been (1) that an agreement to limit oneself in one's own business activities is unenforceable at law but not illegal, and the same is true of attempts as such to monopolize; (2) that combines or agreements primarily to restrain the business of others are illegal, permitting remedy in damages or criminal penalty according to conditions; (3) that not all restraints of competition are contrary to the public interest which the law seeks to uphold. In view of these distinctions, early Canadian legislators guarded against the sweeping condemnation characteristic of the Sherman Act by using from the beginning the significant adverbs

³⁵In the atmosphere of unsatisfactory relations between government and business of the late thirties, there is a trend back toward a freer use of the courts under the anti-combines Acts.

"unduly" and "unreasonably" as applying to restraint of trade. As we might expect, therefore, the protection against combines and trade restrictions existing today, as found in two documents, viz. the Criminal Code and the Combines Investigation Act, is similarly tempered. Section 498 of the Code, unchanged since 1900, declares everyone guilty of an indictable offence and subject to penalty "who conspires, combines, agrees or arranges with any other person . . . to *unduly* limit the facilities for transporting, producing, manufacturing, supplying, storing or dealing in any article . . . to *unreasonably* influence the price thereof or to *unduly* prevent or lessen competition. . . ." And the Combines Investigation Act, declaring against substantially the same activities,³⁶ defines as indictable combines, for the purposes of the Act, only "such combines—as have operated or are likely to operate to the *detriment of, or against the interest of, the public, whether consumers, producers, or others.*"

Pre-war prosecutions, few in number, and limited entirely to organizations of middlemen (grocers and coal importers, etc.), were long drawn and unsuccessful, chiefly through lack of properly devised social machinery. Canadian experience, like American, has demonstrated that administrative features are essential as a supplement to the legal. The first arrangement (Act of 1910) providing for a special temporary board for each investigation was, however, not a success. It laid an unpalatable task on the voluntary applicants for a board. It expected them to show their hand as accusers and remain in the limelight during the investigation. It also placed a financial responsibility on them in that pursuing an application involved some outlay. Consequently, only one investigation was carried through under it in the nine years of its existence. The Act, furthermore, neglected one of the important features which, as we have seen, characterized the Federal Trade Commission Act of the United States, viz. it failed to provide any follow-up authority to promote obedience to the board's orders after it was disbanded. Social wrongs that involve continuity cannot be entirely attended to by temporary boards or commissions. Its penalty threats meant little. Remedy came in 1923 when the present Combines Investigation Act was passed.³⁷ Under it eleven investigations were car-

³⁶The Combines Investigation Act expressly names as illegal (subject to the general qualification) any actual or tacit agreement fixing a common price or a resale price.

³⁷For detailed history, see John Ball, *Canadian Anti-trust Legislation* (Baltimore, 1936). Also review of "Legislation respecting Combinations in Restraint of Trade" (*Canada Year Book*, 1927-8).

ried through in the decade following, thirteen reports were filed, and six convictions made.

The new law featured improvements over the 1910 law along three lines. It set up a permanent official called the Registrar of the Act to function as the administrative centre. He receives applications, considers their merit, carries on a preliminary investigation if necessary, and eventually decides whether or not the case is deserving of the appointment of a Commissioner. At the end of 1934 he had received over 300 applications of which all but 11 were disposed of without requiring special appointments. The great majority were cleared either by correction of the abuse through action of the Registrar himself or by being adjudged trivial or inappropriate. Although not expressly given such responsibility he is in a position to guide offenders and near-offenders into legal paths. As a permanent official, furthermore, he protests the failure of any concern to carry out the orders of the court affecting it. Secondly, the 1923 Act shields the applicant from publicity and makes the laying of the charge easier. Furthermore, by later amendment it is provided that the Minister of Labour or the Registrar may either of them take the initial action without consumers' application. Thirdly, it provides penalties in the form of fines and imprisonment for wrong deeds done, as well as continued after warning. By 1934, \$300,000 had been collected from the convicted offenders. According to the latest version (1946), participation in the formation or operation of a combine is an indictable offence, subject to penalties up to \$25,000 or two years imprisonment. It also provides for the lowering of tariffs and the annulment of patents in cases where combines rely on either or both of these state conferred privileges. The Commissioner now reports to the Minister of Justice instead of the Minister of Labour. The 1946 amendment also provided for the appointment of deputy commissioners with powers defined by regulation, three deputies being named in 1947 to assist with the volume of work undertaken.

In practice most of the investigations under the Act have been made as the result of complaints from the public—usually from primary producers, competitors, or consumers. With two or three exceptions they have been directed against agreements of competitors to fix and enhance prices rather than against big industrial firms charged with anti-social, monopolistic practices. No supervision and control of corporations comparable to that attempted by the American Federal Trade Commission (described above) is fea-

tured. *Investigation, publicity, penalty*, constitute the essence of the Canadian attack with, more recently, responsibility upon the Registrar to see that judgments are carried into effect. Apparently there is still lacking something of what constitutes the true medium of relations between government and a well-conditioned economic order.

Convinced that the functions of the Combines Investigation Act were too narrowly drawn, the Hon. H. H. Stevens, Minister of Trade and Commerce in the Bennett Administration, led a movement of protest which resulted in the more general probe in 1934 by the Royal Commission on Price Spreads. Among other things this body made certain recommendations which resulted in 498a of the Criminal Code. This amounts to a replica of the discrimination clauses of the Clayton Act, coming thus twenty years late. In substance the section declares everyone guilty of an indictable offence who, engaged in trade or commerce, knowingly practises discrimination between persons through giving special discounts, rebates, or allowances to favoured ones; or between places for the purpose of eliminating competitors; or follows a policy of selling goods at prices unreasonably low for the same purpose.

The "Stevens Commission," furthermore, while endorsing the principle of enforcing competition where it really belongs, went on record as favouring the acceptance of monopoly in other realms and recommended that steps be taken to regulate their prices and profits.³⁸

CANADA AND INTERNATIONAL CARTELS

Associations designed to restrict competition are not confined to the domestic sphere. An inquiry into the nature and results of international cartels and similar types of private monopolistic controls affecting Canadian trade was completed in 1945.³⁹ The

³⁸Early in 1948 again the Dominion government appointed a Parliamentary Committee on Prices under the chairmanship of the Honourable Paul Martin. The Committee is to "examine and report from time to time as to (a) the causes of the recent rise in the cost of living, (b) prices which have been raised above levels justified by increasing costs, (c) raises in prices due to the acquiring, accumulating or withholding from sale by any persons, firms or corporations of any goods beyond amounts reasonably required for the ordinary purposes of their businesses."

³⁹Report of Commissioner, Combines Investigation Act, *Canada and International Cartels, An Inquiry into the Effects of International Cartels and Other Trade Combinations* (Ottawa, 1947).

See also V. W. Bladen, *Canada and Cartels* (Toronto, 1947).

investigation involved a survey of the principal kinds of international industrial combinations which had monopolistic effects upon the production and distribution of commodities entering into Canada's external and domestic trade prior to World War II.

The report divided international cartels into three categories, giving examples of each. The first class included arrangements "affecting commodities for which Canada is dependent wholly or in large part on importations"; e.g., agreements relating to fertilizers, flat glass, and tanning materials. One of the most spectacular examples was a pact between the Krupp Company of Germany and the General Electric Company of the United States regarding the price of tungsten carbide, a material used in high-speed machine cutting tools. Instead of competing in the production and sale of this commodity, the two companies in 1928, decided to pool their patents and divide the market. Regarding the results of this policy the report states: "Prior to 1928 the market price of tungsten carbide in the United States had been about \$50 a pound on the basis of shipments made by Krupp. Following the conclusion of the agreement with Krupp the price was raised by General Electric, or rather by its subsidiary, Carboloy Company Incorporated, which it had organized to carry on this part of its business, to \$453 per pound, although the price of \$50 had been previously considered high" (p. 14).

Following a subsequent agreement in 1936, Krupp withdrew entirely from the American market. This gave General Electric and Carboloy virtual monopoly control over the production and use of tungsten carbide in the United States and Canada. The price was reduced in 1936 from \$453 to \$205 per pound, "still four times the high price of 1927." As a result of this policy, General Electric and Carboloy were indicted under the United States anti-trust laws in August, 1940. Immediately there were reductions in the price of tungsten carbide. It fell to about \$32 per pound as compared with \$205 in 1939. In all this, of course, Canadian consumers of tungsten carbide enjoyed no advantage over those of the United States.

The second class of cartels included "those giving Canadian manufacturers exclusive enjoyment of the home market but which bar them from exporting to other markets. Examples of this type are certain chemicals, electrical products and matches." An important case was that of radio tubes and sets. By an agreement made in 1925 between N. V. Philips of Holland (the dominant European

producer) and the Radio Group (R.C.A.—International General Electric—Westinghouse) Canada was assigned to the Radio Group as part of its exclusive territory. The arrangement involving exchange of patents and licences among the members and the use of holding companies gave the Canadian manufacturers exclusive rights to the Canadian market but denied the right to export. This resulted in a dealers' mark-up on the manufacturers' selling price of 113.11 per cent, obviously detrimental to the consumer and obstructive to the expansion of the industry.

The third class involved participation by Canadian exporters in cartel arrangements. Canadian firms secured a stipulated share of the world markets by entering into agreements with producers in other countries affecting such products as aluminum, copper, lead, newsprint, nickel, radium, and steel. An example of the last mentioned was the International Tube Cartel involving twelve countries. It was formed in 1929 and dissolved in 1935. One company admitted that Canadian pipe-makers were allotted 3 per cent of the world's tonnage, a much larger share than they would have secured under competition. Canadian consumers protested their inability to buy abroad.

Generally speaking, international cartels were formed for the purpose of maximizing profits through the exercising of monopolistic controls. These took the form of agreements to maintain or raise price quotations in the face of a downward trend in world prices. Not only that, but restrictions on the introduction of improvements deprived the world of some of the benefits to be derived from technical advances. It will be observed that all three types of cartels, with the possible exception of the third, had undesirable effects upon the Canadian economy. Undue restraints in either the international or domestic sphere by private trade combinations constitute an extra burden on the consumer and an obstacle to full employment. While combines giving Canadian exporters a share in world markets which they would not have enjoyed otherwise might have stimulated employment within Canada, they certainly resulted in uneconomic use of world resources. It is difficult to determine what would be the ultimate effect upon Canadian prosperity.

In any case the fixing of prices, the establishment *without prior governmental direction or approval* of import and export quotas, the allocation of territorial markets, and the control of the application of technological developments in certain industries, not only have adverse effects upon the national economy, but

challenge the sovereignty of the State itself. The Commissioner's report stresses the limited extent to which Canada acting alone can remedy a situation of this sort. A solution calls for international collaboration to curb restrictive business practices in world commerce. Perhaps the proposed International Trade Organization will provide an effective remedy.

Summary Statement.—In these last chapters we have treated with the institutional ordering of production. Institutional arrangements should be developed with a dual concern: first, to achieve the most economic administration of resources, and, second, to accomplish the wisest distribution of the products of industry. Here we have been concerned chiefly with our institutions as they affect the utilization of resources. We have endeavoured to make it plain that these institutions through which we organize production—viz., the partnership, the co-operative society, the corporation, the great combination forms—stimulate and utilize labour and entrepreneurial talent, assemble finance capital, and call into existence different forms of capital goods in very different ways. Each creates its own type of productive society. In the short run we may accept the institutional framework as a condition constant, within which the production process goes on. In the long run we see it changing in accommodation to the various social and economic forces. The references to history that we have made are intended to give some idea of how this happens. The corporation as earlier known lent itself well to economic expansion by way of concentrated control. The co-operative society has emphasized democratic organization and direction by consumers. Economic organization responsible directly to government suggests possibilities of co-ordinated planning and attention to essential services otherwise likely to be neglected. The greater corporation, the consolidation, and the loose association arrangements of the last half century, while featuring new gains through large-scale production and concentrated power, often have been destructive of the best type of competition and have offered a harbourage for much that is hidden and secretive. Some chapters indeed have been economically costly. Government efforts to meet this challenge have been halting and changing and only partially successful. It is questionable if the unrestricted trade association, so difficult to assess just now, is likely to be the best interpreter of the public interest. Most difficult of all to bring within the reach of government control is the international cartel. Its remedy would seem to require political collaboration upon an international plane.

CHAPTER XIII

THE MARKET AND PRICE DETERMINATION

DEFINITION of the Market.—In an exchange society the market becomes the institution of universal interest. The term market is one that everybody uses but which many of us would find it difficult to define. A brief definition which most of us might accept would be a place where buyers and sellers effect exchanges of goods. The reader will perhaps visualize it as the town market-place with its buying and selling operations, and he will distinguish between the wholesale and retail markets for products. The emphasis on the one hand would seem to be on the locality and on the other hand on the exchanging process that is going on. On second thought, however, he will remember that the word is used in other connections where the idea of a specific place is largely absent. He has heard of the money market, the securities market, or the labour market with no thought of any particular locality. This has led the economist to assert that the place is not the significant element, but that there is a market whenever the forces of demand and supply are brought together. We will be safe in assuming, however, that with respect to most commodities there are at least focal points where the conditions of demand and supply are especially significant. In the case of some commodities there may be but one market for a particular good, while for others there may be a number of unconnected markets, and for yet a third class there will be several markets or focal points intimately connected. In the group last mentioned there are sometimes primary and secondary markets standing in special relation to each other and to local markets. The extent to which the different focussing points for a good influence the prices in each other and the nearness to which approach is made to a single price over the whole area in which the good is bought and sold will depend upon the mobility of the good and the degree to which knowledge about the conditions of demand and supply is general. In this matter wheat and cotton, for instance, stand in marked contrast to market garden products.

There is a third point of view from which the market may be

considered, viz. that of organization. We frequently hear it said that some markets are highly organized and that others—the labour market, for instance—are lacking in organization. Most purposeful marketing, however, has organization, in some degree. Arrangements are set up for facilitating, and for regulating the forces of demand and supply. These may be complicated, involving the use of specialists, codes of procedure, and highly developed informational service, as in the great produce exchanges; or they may be simple, calling only for conduct according to a few recognized rules, as in the case of the town market. All trading takes place in accordance with the principles of legal contract which may be thought of as socially sanctioned marketing rules. The organizational aspects of marketing are of great significance and an understanding of them important, especially in periods of rapid change like the present. The chain store, the mail order house, the brokerage firm, the stock exchange, the public auction, the employment exchange, are some of the forms suggestive of the variety in marketing development. Each emphasizes particular facilities in organizing the demand or the supply or both.

Our purpose at present, however, is not to examine these differences. We take it for granted that, one way or another, the forces of demand and supply do become organized, whether under conditions of competition or monopoly, and turn our attention on the centre of interest in every market, viz. price—and how it is determined.

The Role of Price.—It is scarcely necessary to labour the significance of price in an economy where most goods and many services are sold and bought. Price is the money measure of the exchange values of all goods. Not only is it the basis for comparison among consumers' goods but it covers also the factors of cost that are necessary for their production. The entrepreneur looks backward upon one set of prices associated with labour, raw materials, finance capital, machinery, and insurance, and forward upon another set covering his products. Workers sell their services at prices, and buy their food and rent their houses at prices. Consumers, producers, workers, financiers are all held together in exchange relations within the common pricing system. A buying price for one is the selling price for another. Through price, and through the restlessness of human nature to achieve the maximum satisfaction with the least cost, there is movement always toward a general equilibrium resulting from desires for all goods and services and

dislikes for surrenders and costs. Substitution and proportioning depend upon comparative prices as much as the choice of a workman in deciding where he will sell his labour.

Secondly, price acts as a guide to both consumption and production. When the price of oranges runs high in our markets, sales fall off and apples and tomatoes come into an increased demand. The house constructor weighs the comparative merits of oil burners and coal furnaces always in terms of the various prices involved. As for production, the farmer throws his energies into producing those commodities whose price seems to be holding up and withdraws them from those that give no promise of good prices. Price, we say, is the indicator of what should be produced as well as the arbiter of what shall be consumed.

Thirdly, price is a means of allocating productive resources among various uses. In so far as the agents of production are relatively scarce, some method of distributing them among producers must be utilized if goods desired by consumers are to be forthcoming in tolerably satisfactory quantities and combinations. Under a dictatorship, the ruler by decree would indicate how the resources were to be allocated. That is, the dictator would decide what was to be produced and in what quantities and proceed to distribute resources accordingly. His decision might be a wise one. It might even conform to the wishes of the people. But, again, (which is more likely), it might not. In a free enterprise economy the allocation of productive factors takes place, not by dictatorial decree, but through the operation of the price system. If competitive bidding in the market causes the price of a commodity to rise much above production costs, producers in this field will offer higher rewards (wages, rent, and interest) in order to acquire additional quantities of productive agents. Thus price is a mechanism through which the factors of production are allocated among various competing ends.

Fourthly, price is the distributor of income among persons and groups. Inasmuch as most goods today are produced for sale, money is received by the seller, and with that money he buys other goods according to his desires. If the commodity that A produces commands a high price as compared with the goods that he wishes to purchase, he finds himself in the happy position of being able to command these in large quantities. It is comparative prices that determine the distribution of the national income not only among individuals but also among different *groups* and *classes* of the

people. Large sections of our population look entirely to their wages to enable them to command the various goods and services that answer to their wants. Others look to interest collections on money loaned, still others to rents on landed estates. If these wages are high in comparison with the prices of the goods that they desire, then these wage-earning classes come into a comparatively large part of the national income. If wages are low relative to the prices of these goods and services, they come into a smaller proportion of the nation's products for the period. Similarly if interest rates are high, those who live from returns from loans and investments will stand in a better position than at times when these rates are down. Again there are times such as we passed through in the thirties, when the agricultural group in our population receive an unusually small part of the nation's total income as a result of the majority of the commodities that they have to sell standing at prices low relative to the prices of the machinery, clothing, and household goods that they have to buy. Back in the period of World War I, and during the years immediately following the close of the conflict, the situation was quite the opposite. Price, we repeat, affects the relative position of whole classes of our people as well as the comparative conditions of individuals.

Prices and Price Levels.—In the discussion of the determination of price, the reader should get the distinction at the outset between the prices of individual commodities and what the economist calls price levels. For the two, while they mutually influence one another, are nevertheless phenomena which are quite distinct and answer to very different explanations. The causation of individual prices was the centre of controversy for economic theorists during the greater part of the nineteenth century. With the coming of the twentieth century this question was thought to be fairly well settled, and the problem of price levels began to claim the most active minds. With some clarification of this, attention turned again to a fresh and realistic examination of individual price determination under varied modern conditions.

Assumptions of Price Theorizing.—As we investigate the forces that determine price, it is necessary to make certain assumptions in order to provide the ideal conditions requisite to analysis. In doing this we shall not be acting differently from the chemist who assumes the ideal condition of temperature or pressure necessary to his experiment. To be specific we assume that the market is well

organized according to the definition laid down earlier in the chapter, where singleness of price obtains. We assume that the people dealing in that market are possessed of the characteristics of the economic man. In other words, they are rational, informed, and are actuated by the motives of personal gain. We distinguish furthermore different conditions governing different markets, and in view of the bearing of these on behaviour affecting price determination we examine three conditions more or less separately. First, we treat with the condition of pure competition on both sides of the market. Secondly, we assume monopoly control on one side or the other. Thirdly, we deal with conditions of monopolistic competition. This last represents a very broad category of cases where there is neither complete monopoly nor competition through price (underselling or overbidding) though there is competition of other sorts. These differences, however, though making for complexity must not prevent us from developing principles serviceable for explaining the main currents of prices.

Individual Prices: Demand and Supply.—Most persons if asked, "What determines the price of a commodity?" will answer immediately, "Demand and supply." On being asked, "What determines demand?" they will as readily reply, "Demand depends upon the price." Likewise if asked, "What determines supply?" they will say, "Supply falls as the price falls and rises when the price rises." Obviously this is circular reasoning. If supply and demand determine price, then price cannot determine supply and demand.

Now the reader must get away from this confusion, for it has stood as a stumbling-block to many of his predecessors in the study of economics. Books even have been written which failed to clear up the difficulty. How are we to account for the apparent contradiction involved in everyday observations? The answer is that the whole difficulty is a matter of definition. The words demand and supply mean something different in the first statement from what they mean in the last two. If we define demand and supply in one way, the first statement is true and the last two are false. If we define them in another way, the other statements are true and the first statement is inadequate. No meaning that we can give to these terms will satisfy all the requirements of their use as we hear them in daily conversation. We, therefore, take it upon ourselves to make a choice between these different meanings, for without doing so we can get nowhere with scientific explanation.

What, then, do we understand by the demand for eggs in the city market? Is it the amount that will be purchased today at the

reigning price of forty cents? Or does it involve also the amounts that would be taken at thirty-nine cents and at forty-one cents as well? Is it one definite amount actually showing itself at the current price or is it a whole series of amounts that would be bought at all conceivable prices? Likewise what is supply? Is it the amount of eggs that are actually placed on the market at today's price or is it a whole schedule or series of amounts that would be placed on the market at all possible prices?

The authors choose to define both terms in the latter, the plural sense. Demand is defined as meaning the series of amounts that would be taken at one time at various prices. It can be set down as a schedule where the amounts fall off as the prices increase and these amounts can be represented by a graph or curve. Likewise supply is defined as the series of amounts that would be placed on the market at various prices. It also can be arranged in schedule form and has its corresponding graph.¹ It is only when we thus define these terms in the sense of series or schedules that we can say that price is determined by demand and supply. The determination of price and how this all works out we shall now proceed to explain.

Let us suppose that investigation shows that on January 15, the number of storage eggs sold in the city retail market amounted to 1,000 dozens, and that these went at a definite price maintained throughout the day. This, be it noted, is an ascertainable fact. But let us go further and, on the basis of estimates of merchants who are in contact with both consumers and producers, work out schedules of the amounts that would have been purchased by the former and that would have been offered by the latter at various possible prices. Let us assume that the demand schedule shaped up as follows:

At 41 cents there would have been taken							10 dozen storage eggs		
" 40	"	"	"	"	"	"	25	"	"
" 39	"	"	"	"	"	"	50	"	"
" 38	"	"	"	"	"	"	200	"	"
" 37	"	"	"	"	"	"	500	"	"
" 36	"	"	"	"	"	"	1,000	"	"
" 35	"	"	"	"	"	"	1,200	"	"
" 34	"	"	"	"	"	"	1,300	"	"
" 33	"	"	"	"	"	"	1,350	"	"
" 32	"	"	"	"	"	"	1,450	"	"

¹Some authorities challenge the wisdom of defining supply in terms making it symmetrical with demand. They would treat it rather as the stocks which are available—either actually or potentially—for distribution among all would-be consumers. See L. M. Fraser, *Economic Thought and Language* (London, 1937), pp. 168-74. Such a definition does scant justice to the psychological factor and to the existence of reservation prices. See below, p. 240.

And let us assume the supply schedule appeared as below:

At 32 cents there would be offered						0 dozen storage eggs		
"	33	"	"	"	"	500	"	"
"	34	"	"	"	"	600	"	"
"	35	"	"	"	"	800	"	"
"	36	"	"	"	"	1,000	"	"
"	37	"	"	"	"	1,200	"	"
"	38	"	"	"	"	1,300	"	"
"	39	"	"	"	"	1,350	"	"
"	40	"	"	"	"	1,400	"	"
"	41	"	"	"	"	1,425	"	"

Though they are hypothetical figures, these serve to bring out the main trends of relationship between price on the one hand and potential amounts offered and taken on the other.

Let us next proceed to present the graphs which represent these schedules. Taking zero as usual at the lower left corner of the figure and measuring price on the upright (axis of ordinates), and

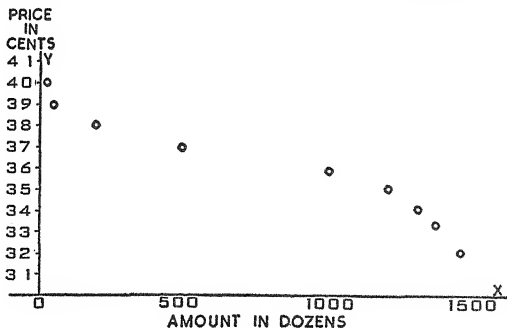


FIGURE 1

measuring amount on the horizontal (axis of abscissas), we may plot the points as shown here from the amounts given in the demand schedule (Fig. 1).²

Joining up the points and interpolating after the usual manner, we have the following graph which depicts the amounts that would

²To save space we omit the portion below the 30 line horizontal.

be taken at an infinite number of prices ranged between 32 and 41 cents (Fig. 2).

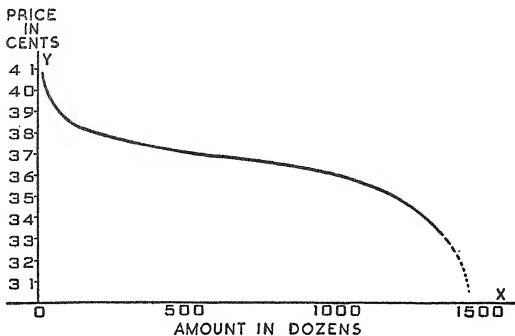


FIGURE 2

Similarly the supply schedule may be pointed and interpolated to show the following results (Fig. 3).

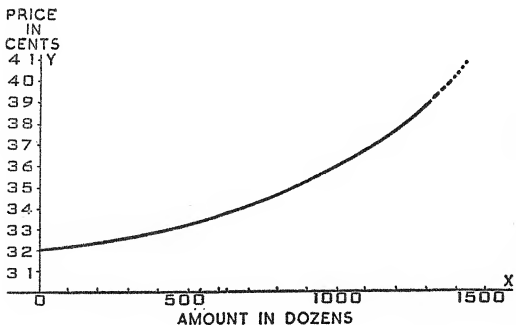


FIGURE 3

Bringing these graphs together with reference to the same axes we have a chart of great significance for the economic theorist. For it illustrates geometrically the determination of price through the interaction of demand and supply (Fig. 4).

The point where the curves cross measured from the horizontal axis shows the price. Measured along the horizontal from the axis of ordinates, it also shows the amount that is actually taken by consumers and placed on the market by producers. The price we find to be 36 cents. The amount taken at this price is 1,000 dozens as is also the amount offered. This fact is expressed in the saying that "the market clears itself" at this price. Moreover, it could not

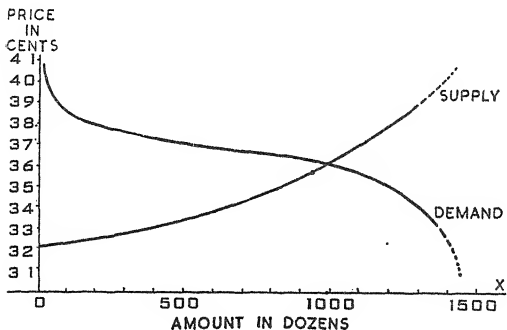


FIGURE 4

clear itself at any other price. If we assume the price to be 35 cents, the amount offered would be 800 dozens, whereas the amount called for by consumers would be 1,200 dozens. The competition of unsatisfied consumers would result in bidding up the price to more than 35 cents. The price could not remain at that figure. Similarly it could not rest at 37 cents. For at that figure 1,200 dozens would be offered as against a call for 500. Competition among producers for the favour of the limited number of buyers would soon force the price below 37 cents. In the same way any price other than 36 cents can be shown to be impossible. The play of the forces of demand and supply inevitably brings it to that point.

Price, then, is determined by demand and supply. But, to return to the argument advanced above, this is true only when we define demand and supply as schedules. Should we define demand as the single amount that will be taken at today's price, as some authors do, and supply as the definite amount that is offered at that price, then it would be more true to say that demand and supply were determined by price. But what we are seeking to discover is "What determines price?" Regardless of how we define these terms, it will nevertheless be true that the fundamental factors are these schedules and the line of causation runs from them to price.

In the literature of business and economics the student will frequently find demand and supply used in the narrower sense. This should not bother him, however, if he familiarizes himself with the two meanings.

Elasticity of Demand.—The nature of the demand schedules for different commodities varies greatly and these differences are reflected in the shape of the curves representing the schedules. Some commodities are said to have an elastic demand when the figures of

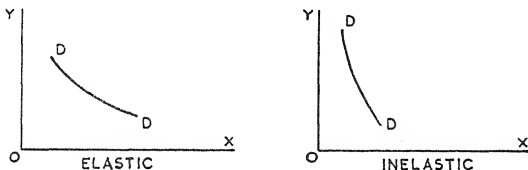


FIGURE 5

their schedules show a considerable falling off in the amount that would be taken with each addition to the price. If with an addition of 5 per cent the purchases decrease 10 per cent, the demand would be elastic. If with an addition of 5 per cent they dropped only 3 per cent, it would be called inelastic. The concept of elasticity is most useful for some purposes if we leave it at this. A more exact statement, however, is offered as follows: a demand is elastic when as the price increases the aggregate volume of money spent on the product decreases; contrariwise it has an inelastic demand when with increasing price the aggregate amount increases. As a learning device it may help to think of an elastic demand as represented by a comparatively horizontal slope and an inelastic demand as tending to the upright (see Fig. 5). Such a procedure, however,

must be used guardedly and confined to the middle-ground of the area between the two axes. The reason will be apparent from examination of the graph in Figure 6. In this case no matter what point is taken on the curve, the rectangle formed by dropping perpendiculars from it to the axes is the same in size as the rectangle formed from any other point. It will be observed that the curve, though tending toward the vertical at one end and toward the horizontal at the other, represents the same elasticity throughout. This suggests the danger of speaking of elasticity and inelasticity in terms of slope. Another danger lies in the fact that for most commodities, elasticity is irregular at different levels of price.

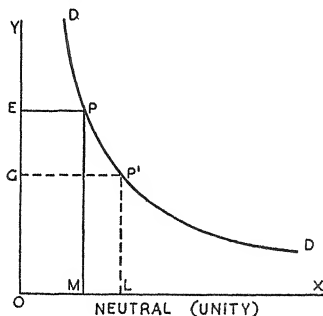


FIGURE 6

Chevrolet sedans would be a fair example of a commodity with an elastic demand. Being in keen competition with other cars of like make, a few dollars' difference in price would tip the scale for or against them in the choice of many purchasers. Oranges, strawberries, and theatre tickets would be other examples. Salt is often cited as an example of inelastic demand. We need just about so much salt for cooking, seasoning, and curing. We have no desire for more. Its cost is so small as compared with its utility that almost everyone gets all he wants. A reduction in price would result in little more being bought. Potatoes under normal conditions are another example. Wheat bread has an inelastic demand in America, though not in Europe. Demands for buttons and

thread are inelastic, and probably that for the cheaper grades of silk hose. That for shoe laces is inelastic while that for white shoes is somewhat elastic. Marriage licences and coffins have inelastic demand. Many commodities have inelastic demand at some levels of price but elastic at other levels. Inelasticity is usually associated with (1) commodities that are looked upon as necessities, their desirability being based on organic needs or strong social habits, (2) commodities tied up with the using of other commodities of great importance, (3) smallness of price. Elasticity is associated more with (1) goods and services of a less necessitous nature, (2) commodities that are competing with substitutes, and (3) commodities that can be readily repaired or made over. The elasticity of the demand for new automobiles of all the cheaper and medium varieties is doubtless greatly heightened by this last circumstance, especially in depressed periods.

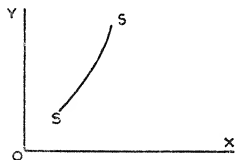


FIGURE 7

Elasticity of Supply.—Supply likewise is characterized by great differences in the matter of elasticity. The amount of fresh local strawberries that will be placed on the market in a given forenoon will probably vary little on account of the price. The berries are perishable. For the most part the price is likely to be less, rather than more, tomorrow. They find their way to market pretty much as they ripen. We would class them, therefore, as a commodity of inelastic supply. The curve would be relatively upright (see Fig. 7).

Supply of calves' liver, lambs' tongues, and hides would also be inelastic, as also would that of electric current produced and distributed under competitive conditions. Supply schedules of beef, wheat, and securities traded on the stock exchange are elastic. Their curves approach more closely to the horizontal type. This matter of differing elasticity for different commodities with respect to both demand and supply is of vital importance to our study. We shall meet with it again from time to time.

The Question of Time.—The reader should note that in all this discussion we have been talking about the conditions in the market at a single point of time. Whether we have reference to a minute, an hour, or a day depends upon the commodity. If we had in mind the organized grain or stock markets, the demand and supply schedules are so transitory that we should have to consider them as applying to brief instants. If we were speaking of potatoes, we should be referring to the trading hours of a market day. If it were suits of clothes the period might well be longer. But in no case have we introduced the time element in sufficient quantity to permit of any *change* in the fundamental conditions of supply or demand. This point is of importance and should be appreciated. Given sufficient time the conditions of production may be quite changed so that the supply schedule will look very different. Likewise across a period, demand may vary extremely. The subject of changes in demand and supply will be treated next.

Causes of Changes in Price.—It is familiar knowledge with all of us that prices are constantly changing. In Ontario cities, the price of fresh eggs drops each year from 40-50 cents in early December to little more than half that in March. Oranges are cheaper in May than in July and August. Wheat dropped during 1929-33 to a third of its price at the beginning of that period. Thereafter it tripled and is now down again to 50 cents a bushel. The prices of farm commodities generally fell greatly in the early thirties, as contrasted with many manufactured goods which changed much less. Normally, apart from monopolized goods and goods of deliberately controlled or customary price, prices are continually changing, shifting relative to each other. Some are going up while others are trending down. Some change rapidly while others move slowly. The prices of agricultural staples may vary 100 per cent during a twelve-month period. The prices of men's worsted suits change much less, though a marked down sale to clear stock may bring temporary reductions. House and land site rents are normally steadier still.

Why Do Prices Change?—Changes in price must come about through a change in demand or in supply or, perhaps, in both. That a change in supply results in a change in price will be appreciated readily enough by consulting Figure 8 which presents the conditions of increased supply. *DD* the demand curve being considered constant, *SS* is assumed to take up the new position *S'S'*. The amounts

that would be offered at various prices have increased. The new point of intersection lies lower on the demand curve than the former point. Price evidently has dropped from 5 cents to 4 cents. This is the typical result of increased supply. The generalized state-

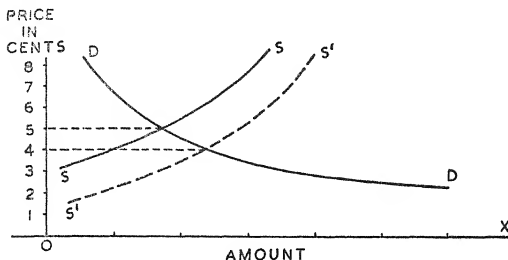


FIGURE 8

ment is that *as the supply of a commodity increases, other conditions remaining the same, the price falls.*

Similarly, it may be shown that a decrease in supply results in increased price. In Figure 9 the new supply curve appears to the

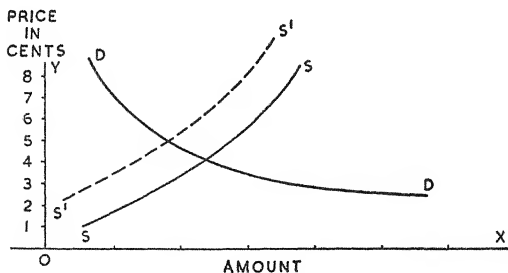


FIGURE 9

left of the original position and cuts the demand curve higher up.

Next, assuming supply to remain constant, it is apparent that

an increase in demand causes an increase in price (Fig. 10); while a decrease in demand results in a decrease in price (Fig. 11).

In real life the situation of one schedule remaining dutifully constant while the other changes, exists only in special cases. With much buying the purchasers are governed somewhat by the trends of the supply schedule. The demand for early strawberries is not without reference to the expectation that the supply curve will be swinging to the right within a few days. Likewise, the sellers of

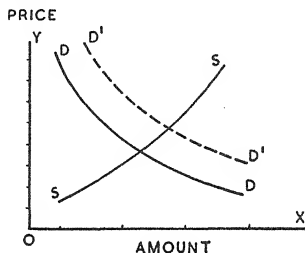


FIGURE 10

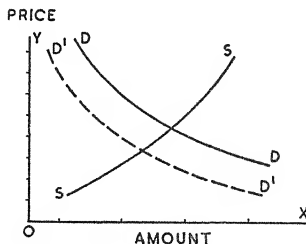


FIGURE 11

non-perishable and non-fashionable goods are likely to be guided in large measure in the amounts they will offer at various prices by the trends in demand. If they think demand will increase in the near future, they will be offering less today. Present marginal sales will be among stocks held for higher prices. Conceivably a situation might exist where a change in one schedule might entirely

offset the change in the other with the total result of the price standing where it did originally (see Fig. 12).

In reality with standard goods whose conditions of production are immediately controllable it is probably true that a change in either schedule tends to be offset in part by a corresponding change in the other. With other commodities it frequently happens that the changes in the two schedules reinforce each other. Witness the case of wheat in 1929 and 1930 when European demand fell off at the same time that supply was being affected by a series of bumper crops in most of the world's wheat areas. The causation of the phenomenal drop in wheat prices is roughly illustrated in terms of demand and supply in Figure 13. The new demand curve $D'D'$

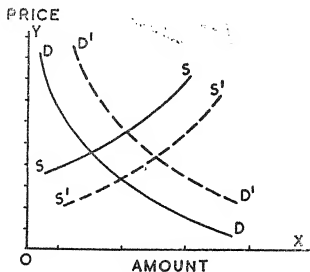


FIGURE 12

and the new supply curve $S'S'$ both lie below the original curves DD and SS . Their point of intersection is naturally far below the former intersection point.

Why Do Demand and Supply Change? The Case of Supply.—Price changes, we find, come about through changes in demand or supply. They cannot take place in any other way. This does not mean, however, that other matters do not affect price. It does mean that all such influences can affect price only through acting upon either demand or supply. Price is in all cases determined by the interplay of demand and supply.

But the next question is, "Why do demand and supply themselves change?" First, let us consider supply. What causes supply to change? The answer is complex. We may note the following considerations:

(a) **Changes in Stock and Changes in Anticipations regarding Future Stocks.**—While stock does not control supply in any crude sense, nevertheless sellers are bound to be governed in some measure by the amounts of available stock relative to the season and period. Though it is true that the supply of storage eggs may be greater on March 1 than on February 1 in spite of the fact that stocks are only half as heavy as on the earlier date, it is likewise true that a heavier stock on February 1 than on the same date last year would, other things being equal, influence the dealers toward larger offerings. Increases in stock of perishable goods such as fresh berries result

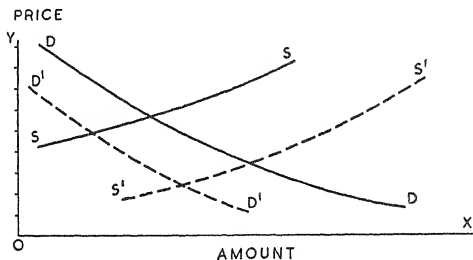


FIGURE 13

rather directly in increased supply. Increases in stock of more durable goods need not necessarily do so unless they are abnormally heavy, and even then the activities of speculators may hold back large sections of stock so that little increase in supply is registered so far at least as the lower prices on the schedule are concerned. Large crops of potatoes will cause the supply curve to move to the right all along the line. Large crops of wheat do not necessarily do so immediately, but if they are world wide and continuing they are bound to cause increased supply offerings sooner or later. In this case changes in anticipated future crops are as vital as changes in present stocks. A report of the falling of needed showers over drought-stricken areas of the West will stimulate increased offerings of present wheat at all prices in the schedule. Changes in stock and in estimates of future additions to stock are more important in influencing supply with commodities requiring long periods for production such as wheat and beef than is the case with commo-

ties like clothing or copper where increases to existing stocks can be controlled more readily by the producers.

Under this general category should be mentioned changes in the regular and normal rate of production due to unforeseen events. The strike in the anthracite coal fields of Pennsylvania, for example, some years ago, caused great reductions in the stock of coal and also added uncertainty with respect to future additions to the stock. The result was a major shifting of the supply curve with a consequent upswing in price.

(b) **Changes in the Cost of Producing New Stocks.**—An invention applicable to production enabling future stocks to be produced at a reduction in cost of 10 per cent, would cause an immediate increase in supply with most stable goods of durable nature. It would have less effect upon fashion goods and almost none on commodities of a perishable nature.

(c) **Changes and Anticipated Changes in Demand.**—If demand has fallen recently, the chances are that sellers in view of their undepleted stocks will wish to get more across the market. This will be decidedly true of semi-perishable commodities. But more important will be the effect of anticipated future changes in demand. If it is predicted that demand is likely to fall, sellers under competitive conditions will desire to capture as much as possible of the stronger present demand. Supply will therefore be increased. If the forecast is that demand is liable to increase in the future, present supply will be decreased.

What Causes Change in Demand?—The forces bearing upon demand are as various and even more wide-strewn than those affecting supply. Here we find variations in the social and psychological realms frequently playing a leading part as contrasted with physical stocks and conditions governing future stocks which are so prominent in causing changes in supply. More specifically the considerations causing changes in the demand schedule are:

(a) **Physical Changes affecting Organic Needs.**—Most prominent here are weather changes. Not only does weather affect the demand for different kinds of clothing and shelter, it also reacts upon our choices of foods, forms of recreation, etc. It goes without saying that our comparative desires differ greatly between summer and winter. These normal seasonal changes registering in changed demand are largely provided against, however, by anticipation of manufacturers, merchants, and storage houses, in so far as durable commodities are concerned. Supplies are regulated in keeping with

seasonal expectations so that the prices may not be greatly affected. Somewhat different is the situation where weather does not run according to expectations. An unusual rainy period will cause a great increase in demand for rubber goods. An abnormally hot, dry summer will stimulate the demand for cooling drinks and ice cream. A snowless winter will slow down the anticipated demand for hand sleds and skis.

(b) **Fashions and Fads.**—No factor in human relations is of more far-reaching consequence in bringing about changes than is that social invention which we call fashion. Few things are followed more slavishly. Few result in more satisfaction and more misery. The essence of fashion is periodical change. That which had utility rapidly loses it. Its demand falls off. In its place a new commodity is substituted, like it but different. The demand for this new commodity is intense for a brief season—provided it meets with public favour. Then it falls off dropping extremely low as the time approaches for the new model, and the whole cycle repeats.

Different from this but somewhat similar in derivation is the phenomenon known as the fad. Some practice or activity becomes the vogue. It is the thing to do. Why? Chiefly because everybody else is doing it. It has no periodic existence and repetition like fashion. It comes and then after a time disappears. But in doing so a demand rises feverishly for some erstwhile unknown or little considered commodity, and then shades out as quickly. Thus it was a few years with mah-jong. Shortly after a thriving industry sprang up overnight to meet the demand for jig-saw puzzles. The fad is an interesting illustration of unpredictable rapidly changing demand.

(c) **Invention.**—Invention, we have seen, affects supply. Quite as significant is its bearing upon demand. It acts both directly and indirectly. The invention and refinement of the radio have given cause to a new demand rising by leaps and bounds. It has likewise caused a falling off in the demand for phonographs. It has had a distinct bearing on the demand for pianos and other musical instruments and even for quality furniture. Every important invention in consumers' goods inevitably registers changes in the demand for many other goods, decreasing the demand for competitors, and increasing the demand for allied or supplementary goods.

Other causes of variations in demand are changes in population, changes in the degree of prosperity, institutions and customs (the dietary demands of Catholic communities differ between Lent

season and the rest of the year and between Fridays and Saturdays), intermittent advertising, and salesmanship pressures.

No pretence is made that these lists are inclusive. They are merely presented as serviceable in opening up the field. The reader would do well to centre his attention on a few well-known commodities and attempt to discover the exact reasons for changes in their prices over a period of time, noting in each case whether they act mainly behind demand or supply. Concrete studies will reveal that for some goods demand runs fairly evenly, and this we should expect inasmuch as we found in Chapter v that some of our wants are steady or regularly recurring. For other goods demand varies widely. The concept variability of demand is for some purposes no less important for study than elasticity.³

³For the long-term outlook concerning what types of goods are likely to have increased demand with greater wealth accumulation and progressive control over resources, consult again the analysis of wants according to expansibility (pp. 64-8). There it was suggested what wants were narrowly prescribed, what present types were capable of stimulation, and what were the areas where new desires were likely to spring.

CHAPTER XIV

DEMAND AND SUPPLY: WHAT DETERMINES THEM?

WHAT Determines Supply?—We have come to see price as determined by demand and supply. We have come to see demand and supply as schedules of amounts, capable of being represented by graphs, and existing at some point of time. But explanation requires that we go farther than this. We cannot stop with showing how one unknown depends upon other unknowns. We must account for these latter themselves. We must ask what determines demand and what determines supply.

Taking the latter first, how are we to account for the supply schedule of storage eggs standing just as it does on January 15 (see p. 226)? Why does its graph take on this particular shape? The answer is found in a number of circumstances that are taken into account by the dealers who control the stocks of this commodity. In the first place there is the total amount of eggs in storage on that morning which normally must find sale sometime in this market. This is a concrete fact which may not be lost sight of. In a sense it is a basic consideration. But let us not confuse supply with stock. While the one is a concrete fact, the other is a matter of mental determination. The one is a definite amount; the other a series based upon human calculation and choice. Some part of total stock will be placed on the market at today's price; the rest is held back for some higher, or a number of higher, "reservation" prices. In truth a number of considerations influence the dealers who are naming the supply figures. One is that this whole stock must be cleared by early April when customarily next year's eggs begin to be stored. Another is their knowledge of how many eggs are stored in other districts whose competition might affect this market. They are observing, too, how stocks here and elsewhere compare with those of other years. Still another consideration is the number of hens in the country producing fresh eggs at the present time. Again they are asking what are the prospects of February demand as influenced by prices of meat and other competing foodstuffs? What of industrial conditions in the cities? Is purchasing power trending up

or down? Supply is dependent upon all these matters as they are weighed and balanced in the minds of the dealers. The reader will do well to work out the probable appearance of the supply curves and schedules for different commodities and services with which he is familiar. He will do well also to make some enquiry about the governing circumstances in each case. Such practice and application of these principles will serve to give them meaning and reality. Let him try out with commodities of widely different nature such as strawberries, Christmas trees, cash wheat, watching in each case the relation between supply and stock. He must remember as he proceeds that a supply schedule always must have a date. The supply schedule for storage eggs on March 31 would doubtless be quite different from that which we have for January 15. The schedules for fresh eggs would likewise vary greatly as between January 15 and April 15, showing a much greater elasticity on the latter date. He will find as he carries on his investigation with different commodities that some of them have very peculiar schedules and curves. Let him attempt, for example, to construct a schedule for peaches on Saturday afternoon fifteen minutes before the closing of the market. Let him draw the curve for a famous painting by a dead artist—or of a living one for that matter; let him contrast these with the supply curves of durable goods and of goods that are readily reproducible. All these differences and peculiarities, of course, have their bearing upon price. But to this we shall return later.

The Concept of Marginal Sales.—In presenting the nature of supply in recent paragraphs, we may have left the impression that all dealers would move together in placing like proportions of their existing stocks on the market at various prices and that all are influenced *alike* by these forces operating behind supply. Such, however, is not the case under competitive conditions. This would be true probably only where there was a prearranged pooling of the market. Where competition reigns it may be that some owners of eggs (referring again to p. 226) would place none on the market at 36 cents but would only be induced to do so by a price of 37 cents. Others would offer a small amount at 36 cents. Still others would be ready to offer some at 35 cents if no better price were available while at 36 cents they would throw in large quantities. Now, it will be evident that the first group of dealers have no such direct effect upon today's price as have the others. Their presence, however, with stocks ready to be turned in at the time when price rises

a cent, or perhaps threatening to be offered tomorrow even if price fails to rise, is not without its influence upon the decisions of these other groups who are selling at today's price. The second and third groups are looked upon as having greater significance. They are called marginal sellers inasmuch as it is their stocks, or some part of them, that are barely brought in by the 36 cent price. It is their addition that is thought of as making this the price. Without them it would stand higher. The third group are potentially *infra*-marginal sellers also to the extent that they would have sold eggs at 35 cents. It is well to get a picture of supply in terms of goods differentiated as to control with the various controllers forecasting and judging the market differently, and to appreciate that certain parts of the offerings of the day are marginal, other parts *infra*-marginal, while the rest, though featuring in the schedule fail to become a part of the sales of the day.

Market Behaviour and Normal Price.—One influence that affects the behaviour of both dealers and buyers is their consciousness of a normal price for each commodity. This is a hypothetical concept rather than an actual price and has been defined as the price about which there would result a long-run equilibrium between the rate of production and the rate of consumption of a good. A future chapter will explain more fully how this is related especially to cost of production. Our reference to it here is only to point out that it is a potent influence on market price. For cost of production (and ideas of the normal) affects supply through sellers' estimates of what it will be in the future, as well as through the knowledge of what their present stocks cost.

Utility and Demand: Marginal Utility.—The relation between utility and demand is apparent at once from the experience of each person, for no one has a demand for a commodity unless it represents utility to him. The exact connection, however, is rather complex and requires explanation. Especially is this true of bringing the two under the same measuring tools.¹

In the first place, it must be appreciated that experience of utility is intimate and subjective, existing only in the feeling life of the person. Being such, it is not observable by the outsider and can only be measured by the person himself. The individual can and does measure the utility of one thing against another constantly in a world of scarcity. Demand on the other hand is objective, and

¹In the discussion that follows it is assumed that all parties have purchasing power in some degree.

any student of the market can observe it. It is a schedule of amounts of a commodity that will be taken at various prices within a limited time. Demand is measurable, in other words, in terms of money.

But demand as we have presented it is collective and social, whereas utility is, and must ever be, individual. We shall make progress, therefore, in establishing a connection by first breaking down market demand into the individual demand schedules of all the various people that affect the market. This we must do, largely as a theoretical exercise, since individual demand schedules are not as much a matter of observation as is market demand. We may assume, therefore, that individual A has a demand schedule for each commodity that interests him, oranges say, and likewise individual B has his, and so on. This done our next step is to ask if there is a schedule of utility for oranges for each person that might be associated in some way with his individual demand schedule. Reference to page 64 will show that there is. There it was established that the amount of utility associating with each apple depended upon how many apples a person had and that it fell off with the consumption of each apple. From this we proceeded to show that the *amount of utility* derived from any good depends on the *rate of consumption*.

How much then, let us ask, is the utility of a pair of shoes to A? And how shall we measure it? The answer is, it depends on how many pairs of shoes A has for this year's consumption, and we can only measure it by comparing it with the utilities of other goods for A. If we assume his rate of consumption is two pairs of shoes for the year, how many cigarettes will he give up rather than sacrifice one pair? How many movies would he forgo? If we assume his rate of consumption is three pairs, how much of each of these other goods would he deny himself rather than give up one pair? Presumably less than under the first assumption. This, then, is the approach to measuring utility of a commodity for any person. The amount of any other commodity that he will barely give up in order to retain his present rate of consumption of the commodity under consideration is the *marginal utility* of the commodity at that rate.

But one good, we have seen, has special significance in measuring. It commands all other goods in exchange. The measure of the utility of a pair of shoes to A, therefore, at any particular rate of consumption is the amount of money he will give up rather than sacrifice one pair. Let us assume now that we find A actually con-

suming four pairs of shoes per year. We raise the question of how much more utility he enjoys from the four pairs than he would from three.² The answer will be conveniently in terms of how much money it would take to cause him to give up one pair or how much he was willing to pay for the last pair. This is the marginal utility of shoes to A, and presumably is measured in A's experience against his esteem for money.

We may now set forth this schedule of diminishing utility of shoes for A as follows (assuming figures of marginal utility):

For 1 pair of shoes only, the utility to A would be	\$100.00
" 2 pairs" " the marginal " " " " "	15.00
" 3 " " " " " " " " "	10.00
" 4 " " " " " " " " "	9.00
" 5 " " " " " " " " "	8.00 etc.

Similarly we might establish for B a schedule of diminishing utility for shoes:

For 1 pair of shoes only, the utility to B would be	\$80.00
" 2 pairs" " " " marginal utility to B would be	12.00
" 3 " " " " " " " " " "	9.00
" 4 " " " " " " " " " "	6.00

Each of these can be plotted as in Figure 14. It is necessary to warn the reader again, however, that each of these is a separate inner experience. We cannot plot them on a single chart for although measurement is in terms of dollars in each case, the esteem value of money itself is not likely to be at all the same with the two men. A may be richer than B, and it is likely that one or the other will have a keener capacity for enjoying most economic goods that money commands than the other.

Our next point is to note that an individual demand schedule arises naturally from each diminishing utility schedule. For A it would read:

At prices above \$100 A would take 0 pairs of shoes	
" " " \$15 and up to 100 A would take 1 pair of shoes	
" " " 10 " " " 15 " " " 2 pairs " "	
" " " 9 " " " 10 " " " 3 " " " etc.	

Similarly a demand schedule exists for B. Here, let us observe, the two curves can be drawn on the same chart for they represent, not separate experiences of utility but objective reality, viz. amounts

²Note this is a different question from asking how much utility does he get from the last pair considered by itself.

of shoes that would be taken at different prices. Money measures all goods alike in the market: it measures utilities only within the individual experience and serves not at all in comparing utilities among persons.

Remembering that similar demand schedules exist for each buyer or potential buyer affecting the market, we can understand how the

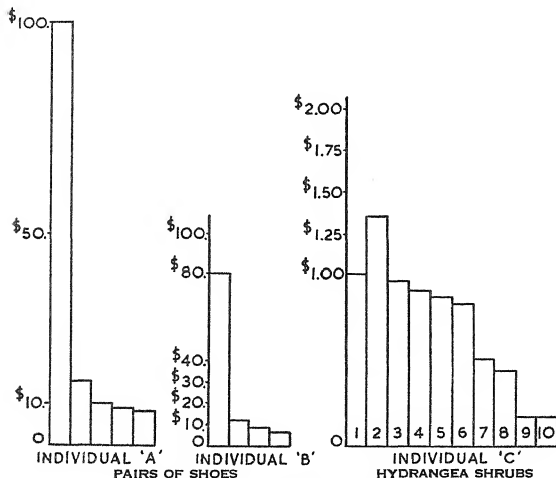


FIGURE 14.—Diminishing utility scales.

blending and summation of them all constitutes the market demand for shoes.

Diminishing Utility and Elasticity of Demand.—The curves of diminishing marginal utility of shoes fell very sharply in their early courses for both A and B and less rapidly thereafter. Likewise the curves of individual demand moved from relative inelasticity to conditions more elastic. Were we to take a commodity appreciated in a different way, we should find greater elasticity resulting from a slower rate of diminishment in utility. We might find the mental situation as follows in the case of a citizen with a large lawn, in his

esteem for different numbers of hydrangea shrubs (Fig. 14), and an individual demand curve likewise first rising and then falling slowly. If we might assume that the marginal utility for other buyers of hydrangea shrubs, also, fell off more slowly, we should know that the market demand for shrubs was more elastic in its earlier course than that of shoes.

With the question of why marginal utility falls rapidly in one case and slowly in another we need not stop here. It involves the study of substitute goods, complementary goods, and the degree of insistence of the human organism and the social habitat for the particular good in question.³

Marginal Utility and Price.—In our study thus far there is nothing to indicate how price is related to marginal utility and why price is what it is. We have been concerned purely with the dependence of demand upon utility where people are buying in competition. In fact, they think of the price of the good as already established. Nothing that any one of them is likely to do will have any effect upon it. Consequently each continues to take the particular commodity until the measure of its marginal utility to him just equals the price. If the price of shoes is \$9 per pair, A will stop buying with his fourth pair and B with this third. Let us, however, consider a different situation where a person is one of a very few great buyers; conscious that the amount he orders will affect the market price considerably, he will still keep on buying until the marginal utility is equal to the price. The establishment of that equality will, however, not be as simple, since price itself is higher as he considers a bigger order. In this case the marginal utility of the individual buyer seems to have determined the price. Actually, however, the big buyer was operating in view of a condition of supply that was equally potent in the price formation. And similarly, where the small competitive buyer operates in view of what seems an established price, his individual action along with those of hundreds of others, really constitutes the whole demand condition which along with the supply condition determines the price. His influence is potent although he may not realize it. Price is determined by the entire schedules of both demand and supply, but the marginal utility for each person who actually buys will always equal the price. And this implies, of course, that the skilful shopper pushes the purchases of each commodity to the point where the *final dollar spent* in each line yields the same utility. Awareness of the whole

³See *supra*, chaps. v and vi.

field of possibilities means, furthermore, that money set aside for future purposes such as next summer's vacation or going to college next year must rate as alternative uses whose marginal utility is in relation to the marginal utilities of goods actually purchased in proportion to the price involved.⁴

Ultimate Factors Behind Utility.—This analysis of market demand into individual demand schedules which rest in turn upon scales of utility by no means exhausts the possibilities of explanation. We might carry the process further back to the more ultimate factors which influence utility itself: custom, tradition, fashion, religion, patriotism, education, advertising and salesmanship, organic needs, individual peculiarities, etc., etc. An interesting study for the reader would be to consider particular goods that he uses, trace their utilities to their determining influences, and watch them working their claims in competition with the utilities derivable from other goods that are appealing to him.

Special Cases of Demand: (a) Derived Demand.—Our presentation of utility as the force behind demand leads us to forestall the criticism that for many commodities, viz. those that do not enter into direct consumption and which have been classed as producers' goods, there is no utility involved. They do not render any direct satisfaction. There is no enjoyment in the utilization of a certain amount of steel in the making of a cylinder for a Pontiac car. Nevertheless there is a demand for steel and part of it rises from this very source. It is plain enough here, as with all producers' goods, that the demand derives indirectly from the utility of the consumers' good. The utilities offered by the Pontiac car give rise to a demand for it, which create a demand for cylinders, which in turn give rise to the demand for steel. Consumers' goods are the reason for the existence of capital goods. Directly or indirectly all demand has its origin in utility. (For certain basic producers' products such as steel and copper the fluctuations in demand are liable to be very great inasmuch as they enter into the making of other *capital goods* and therefore reflect in their demand schedules the ups and downs in the demand for these other goods as conditions move from prosperity to depression.)

(b) Joint and Complementary Demand.—Another special case covering a wide range of commodities is that of complementary demand. When we buy a tennis racquet we find it useless without tennis balls. A safety razor calls for safety blades. Fishing poles

⁴See Appendix I on p. 249, for criticism of marginal utility analysis, etc.

are of little use without line and bait. Automobiles create a demand for gasoline and oil. Riding horses, saddles, and riding costumes go together, as do hockey skates, sticks, and pucks, college gowns and mortar boards. The principle is far-reaching, the complementary goods sometimes being so closely allied as to necessitate each other completely and in other instances shading off into a condition of mild interfluencing. When the goods are so related that they are always required in the same proportion, the condition is called "joint demand." An example would be several necessary parts in the assembling of an automobile where they have no separate sale for repair purposes. Plainly in the case of "joint demand goods," the utility schedules of each one for each consumer will not be readily distinguishable from the utility of all together. This means if one of the group is very scarce and the rest are not, it may absorb almost the entire price. Practically their prices will depend on relative cost. With goods that are only complementary, utility schedules will not be so completely interdependent, nor will individual demand schedules, nor market demand schedules. Gasoline has a demand schedule which is only roughly associated with the demand for cars and a scarcity of cars in the market will not necessarily reduce correspondingly the marginal utility of gasoline. It will be readily appreciated that complementary goods will be characterized by inelasticity of demand, this being especially true of the least expensive items of the group. A rise of a few cents in the price of gasoline will have little effect upon the amount of it taken by motorists. A similar rise in the price of oil will have even less effect.

APPENDIX I

Criticisms of the Marginal Utility Analysis and Static Schedules of Demand and Supply.—The marginal utility analysis that we have been presenting is now a half century old, and has not failed to arouse strong criticism among the economists. Some have gone so far as to say that the psychology underlying it is so faulty and that it falls so far short of picturing the real situation in the market that they would discard it altogether as a means to price analysis. Again it is charged with drawing attention from the study of the ultimate forces determining price and price changes. The majority, however, while recognizing its shortcomings for giving a complete analysis of price causation, nevertheless retain it as the best weapon available at the present stage of the science for analysing demand. The criticism proceeds along various lines.

In the first place, it is contended that the marginal utility theory postulates a degree of calculation in the mind of the consumer that does not exist. No such complete personal budget exists in actual life as that which we have suggested as guiding a shopper in the making of choices

so as to bring the utilities provided by the last dollar spent on each line to equality. This line of reasoning has already been approached in our discussion of the rationality of choices (Chapter VI), and need not detain us here. What we are presenting now is merely a refinement of the same thing, implying that the individual has scales of utilities for different goods and that these are brought into comparison at the margin in making purchases. Furthermore, that resulting from these, there exists for any particular good at any point of time a schedule of increasing amounts that he will take as measured against a decreasing range of prices. This we have called his individual demand schedule.

In the second place, the critics argue that there is no such stability in the buyer's scale of choices over periods of time as the theory suggests. Utility scales are ever changing with the moods of the individual, with the entry of other goods that he had not previously considered into his field of vision, and with the changing appeals of the advertiser. The idea of the same scale of choices persisting while one is buying theatre tickets as when he is buying shoes implies a static condition in the mind of the consumer that is not to be found in real life.⁵ The truth is, on the contrary, the mind of the buyer is ever "on the make." The very fact that people often regret on the way home the purchases they have made is evidence that their scale of choices changes.⁶ With scales of utilities ever changing, it follows that individual demand schedules must likewise fluctuate from moment to moment.

Thirdly, it is contended that this picture of the individual's demand schedule for a good based, as we have seen, upon the diminishing utility series of the same good, reflects a too-independent condition. It represents the buyer as standing ready to take goods in varying amounts simply according to changing prices. It implies that demand is independent of anything producers may do, whereas in fact producers are ever busy "creating" demand for their commodities. It is of the very nature of advertising to build up utilities in the good that is being sponsored and thus to change the demand schedules of the purchaser favourably to this good, unfavourably toward any goods that may be in competition with it. The true way of viewing demand, therefore, is to see it not as something pre-existing, to which would-be sellers adapt their stocks but as ever being influenced and re-created by the sellers.

The answer to these lines of criticism is that the element of *time* inevitably does allow changes in our desires for goods, and producers are bound to make use of this to draw our attention to the superiority of the goods they have to offer. But we look upon utility comparisons as pertaining only to the moment of purchase or shall we say to the period of the day's shopping. As the services flowing from the good are provisioned at that time, as opposed to those anticipated as coming from all others of like price, so is the choice made. In the main, we are sufficiently consistent in our sense of comparative values across short periods to justify us in building

⁵See J. M. Clark, "Economics and Modern Psychology" (*Journal of Political Economy*, vol. XXVI, Jan. and Feb., 1918, p. 19).

⁶*Ibid.*, p. 20.

a theory of demand upon it. Stability in utility scales means stability in demand schedules. The individual is not *chaotic* in his demand according to fashion and mood nor altogether pliable in the hands of the seller.

In the fourth place it is pointed out by the critics that utility to the purchaser does not pertain to many of the goods that pass through the market, and consequently it is an insufficient category with which to make an analysis of price determination. Machinery, tools, agricultural land, the raw materials of industry—all these lack utility of themselves. In addition, there are wage-bargains, investments in stocks, speculations in grain, etc., all of which involve the pricing process.

One answer to this we have made on page 247 where the concept "derived demand" is introduced. Another way of getting over the difficulty is to admit the full truth of the criticism, abandon the utility analysis for such goods, and speak in terms of price-profit calculation as determining the conduct of the buyer even as it does the seller.

A similar criticism states that even among final consumption goods, many are purchased not for the direct use of the buyer, but for other members of the family or other consuming group and consequently the utility analysis cannot apply. This may be met by a liberal interpretation of the term utility. A mother choosing for her family purchases goods in keeping with what she considers the maximum utility ideal for each and all.

CHAPTER XV

COST AND PRICE: ANALYSIS OF COST

AS has been demonstrated in Chapters XIII and XIV, the price of a commodity at any particular time is determined by the interaction of demand and supply. Since the price is governed by market forces over which no producer exercises *complete* control (or no control whatever), each entrepreneur will endeavour to adjust the size of his output so that he will secure the greatest possible net gain at the prevailing price. In order to understand the individual producer's policy in relation to market price, it is necessary to study (1) the problems involved in cost of production and (2) those arising from conditions under which goods are offered for sale. The present chapter deals with the first of these.

The Problem of Proportioning the Productive Agents.—If the entrepreneur is to conduct an enterprise successfully, he must unite the factors of production in proper proportion. The business man, whether he realizes it or not, is confronted with the problem of using that particular union of productive resources which will yield the maximum net returns. In order to arrive at the desired combination it may be necessary to do a considerable amount of experimenting, using a little more or less of any one factor in association with the other two. Assuming perfect competition,¹ the entrepreneur who does not succeed in making the most economical use of the productive agents not only fails to maximize his profits but deprives society of a larger flow of goods and services.

The Principle of Diminishing Productivity.—In solving the problem of correctly proportioning the productive agents and determining the size of his output, the entrepreneur is compelled to take several important elements into consideration. The first of these is the *principle of diminishing productivity*.

Suppose we take an acre of land, which may be considered the *constant factor*, and experiment with regard to crop yields by using different amounts of fertilizer, which may be called the *variable factor*. We would probably find that when two doses of fertilizer

¹See *infra*, pp. 268-73.

were used the size of the crop would be greater than that resulting from only one application. The addition of a third increment might increase the yield still more. If the process were continued, however, a point would be reached beyond which the use of further doses of fertilizer would yield a larger total crop but *the rate of increase would be diminished*. In fact, if the experiment were extended sufficiently, the size of the crop might actually decline. This tendency to an increase in total product at a diminishing rate resulting from the application of variable factors to a constant is known as the principle of diminishing returns or diminishing productivity. It was first observed in connection with agriculture when successive doses of labour were used on land. But it applies equally well to the other productive resources when any one of them is considered as a variable. The principle is illustrated by the following table:

TABLE XI

Land (constant factor) 1	Number of labourers (vari- able factor) 2	Total product (units) 3	Average product 4	Marginal product 5
10 acres	1	100	100	...
10 "	2	210	105	110
10 "	3	330	110	120
10 "	4	420	105	90
10 "	5	500	100	80
10 "	6	565	94	65

In the foregoing table, land is the constant factor (10 acres) and labour the variable. It will be observed that as additional labourers are used the total product becomes ever greater. The rate of increase is accelerated with the employment of the second and third worker, but after that it declines. Diminishing productivity sets in with the use of the fourth labourer. This is clearly indicated by the figures in columns 4 and 5. The average productivity per worker was greatest (110) when three labourers worked on ten acres of land but declined with the utilization of additional man-power.

The marginal product shown in column 5 represents the increase in total product resulting from the use of another labourer. When

the second worker was hired, the increase in yield was the difference between the total product resulting from the efforts of two labourers (210) and that of the first employee working alone (100). This amounts to 110. The maximum marginal product per labourer (120) was achieved with the utilization of the third worker. After this the marginal product declines and, if enough workers were added, it would eventually be zero or even a minus quantity as a result of over-crowding.²

The concept of *marginal product* is, as already intimated, associated with the application of additional units of any factor considered as a variable. It might be men, it might be tons of fertilizer, or it might conceivably be acres of land added to a human and capital set-up considered as constant. In all cases, however, the matter of real importance to the entrepreneur is the best profit combination. This brings in the question of *values* and *comparison of values* of the increments of resources used, or whose use is contemplated, and also comparison of these values considered as costs with the value of additional product resulting. The entrepreneur may be said to have "arrived" when the values of the marginal products of all the factors are in exact proportion to the price of the factors themselves.

The Least Cost Combination.—Another matter of considerable importance to the entrepreneur is the least cost combination. If the business man's problem were merely a matter of determining the greatest average or marginal product of any one factor in combination with given amounts of the other two, his task would be immensely simplified. If the agents of production were free, this question would not worry him. But the fact is they are not free. Land, labour, and capital used in an enterprise entail a cost to the entrepreneur. Hence, for any given output, he is concerned with getting the most economical combination of the factors of production. That adjustment of the productive factors which, with a set amount of the constant, yields a product at the least possible per unit cost, is called the least cost combination. This is one of the things with which the entrepreneur is ever concerned. Although of itself it is usually not his final aim. A study of Table VIII will show its nature and significance.

The figures in Table XII are based on those in Table XI. Rent

²The same applies to the use of additional units of machinery, or more and more land. The principles of diminishing and marginal productivity are always formulated on the assumption that the "other factors" remain fixed and that there are no changes in the arts (inventions, new resources, etc.).

is assumed to be \$10.00 an acre and wages \$100 per worker. Rent in this case may be looked upon as a *fixed cost*; that is, a cost which does not vary with the size of the output. Wages, on the other hand, are a variable cost, increasing as the scale of production becomes greater and *vice versa*. Practically every business firm incurs both types of costs.

TABLE XII
MONTHLY COST SCHEDULE OF FIRM A

Total product	Rent of land (\$10 per acre)	Wages of labour (\$100 per worker)	Total cost	Average fixed cost (rent) per unit	Average variable cost (wages) per unit	Average total cost per unit	Marginal cost
0	1	2	3	4	5	6	7
100	\$100	\$100	\$200	\$1.00	\$1.00	\$2.00	.....
210	100	200	300	0.48	0.95	1.43	\$0.91
330	100	300	400	0.30	0.91	1.21	0.83
420	100	400	500	0.24	0.95	1.19	1.11
500	100	500	600	0.20	1.00	1.20	1.25
565	100	600	700	0.18	1.06	1.24	1.54

It can be shown from the data presented in Table XII that the entrepreneur will not stop expanding output when the maximum productivity per labourer (Table XI, column 4) has been reached. In other words, he will extend production beyond the point where the principle of diminishing returns commences to operate. Instead of stopping with the third labourer he will hire a fourth. Why will he do this? The answer is that he is attempting to obtain the lowest possible average cost which is determined by the relation of fixed to variable costs.

It will be observed that the average fixed per unit cost continues to decrease as the output increases (Table XII, column 4). The average variable cost decreases so long as not more than three workers are used (column 5). With the addition of the fourth labourer, that is, when diminishing productivity sets in, the marginal cost begins to rise. The entrepreneur will hire the fourth labourer, however, since the increase in average variable cost is more than counterbalanced by the decrease in average fixed costs. This results in a lower average total per unit cost. In our illustration it is \$1.19 instead of \$1.21. The latter is the average total

cost the entrepreneur would have incurred if he had stopped expanding output just before the tendency to diminishing productivity of labour appeared. If the price of the produce, as determined by the forces of demand and supply in the market, were \$1.20 per unit, our business man could operate to advantage with four labourers but would be forced to cease operating with only three. The reason for this is that his average per unit cost of production then would be \$1.21 or one cent higher than the price of the finished product.

Although the least cost combination in the above illustration was *ten acres* of land and *four labourers*, it by no means follows that this would be the most economical proportioning if the prices of the factors were different from those shown in Table XII. Suppose rent had been \$20.00 per acre (instead of \$10.00) and wages remained unchanged at \$100 per worker, the least cost combination then would be ten acres of land and five labourers. That is, the proportion of labour, now a relatively cheaper factor, to land is increased. On the other hand, if rent were unaltered at \$10.00 and wages rose to \$200, the lowest cost scheme would be ten acres and three labourers. In the former case, the minimum average per unit cost would be \$1.40 and in the latter \$2.12. Of course, neither of these combinations would be profitable unless the price of the product rose to at least \$1.40 per unit.

The preceding analysis of the least cost combination as a factor determining the size of the output applies only to the *marginal producer* or *firm*. The *marginal producer* is that entrepreneur whose gains are just sufficient to keep him in business. Referring again to Table XII and assuming that all fixed costs (including a return to the entrepreneur equal to that which he could obtain if employed elsewhere) are included under the heading "Rent" (column 1) and all variable costs under "Wages" (column 2), then our business man could remain in operation even if the price of his product were as low as \$1.19 per unit. Let us assume this to be the price. But at this price he could remain in business only if his output were that which can be produced at the lowest average per unit cost. Under such conditions this business concern, which we have designated Firm A in Table XII, is a *marginal producer*.³ Firms operating at a lower average cost, however, will find it profitable to extend production beyond this point. They will not cease to expand output

³Unless all costs of production are considered to be "opportunity costs," in which case the cost to each firm is the same.

when they have arrived at the least cost combination. The reason for this will become apparent when we have studied the relation of *marginal cost* to *marginal revenue*.

Marginal Cost of Production.—The term *marginal cost* is used to denote the increase in total costs occasioned by the addition of the last (or one more) unit to the output. Marginal cost is shown in Table XII, column 7. It is calculated by dividing the rise in total costs⁴ resulting from the addition of another unit of the variable factors by the marginal product effected through the use of such unit. For example, in Table XII, the addition of the third unit of the variable factor increased total costs (column 3) from \$300 to \$400, that is, by \$100. The marginal product is 120 (Table XI, column 5). Therefore, the marginal cost is $100 \div 120 = \$0.83$.⁵ The cost of adding the fourth marginal product is \$1.11. (For reasons to be explained later, this cost in pure theory will be equal to the lowest average total cost, namely \$1.19.)

It should be noted that when the fifth variable factor is used, marginal cost rises to \$1.25, which is higher than average total cost. With reference to our illustration, Firm A could not produce indefinitely goods which cost \$1.25 and sell them for \$1.19. This further supports our previous conclusion that the marginal producer will not expand output beyond the point of minimum average total cost.

Marginal Revenue.—The expression *marginal revenue* is used to describe the net addition to total receipts resulting from the sale of the last (or an additional) unit of product. This net addition may or may not be equal to the price of the commodity. If the sale of additional units has no effect upon price, marginal revenue and price are equal; otherwise marginal revenue will be less than selling price. The following table illustrates the nature of marginal revenue and shows its importance with reference to marginal cost.

Table XIII portrays two different circumstances of sale. Columns 4 to 7 show what happens when the seller can market varying amounts at a constant price. Columns 8 to 11 indicate the result of having to lower price in order to increase sales. Marginal revenue is shown in columns 6 and 10. In the first case, it is the

⁴The same result can be obtained by considering the increase in the variable costs.

⁵In pure theory only infinitesimally small increments of change are considered. Strictly speaking, in our illustration, the cost of adding the 330th unit alone should be observed. But for practical purposes the method outlined above is sufficiently accurate.

same as price (column 4), because with each successive sale the addition to total revenue is always equal to the selling price (\$6.00). In the second case, marginal revenue (column 10) falls below price. This is always true under conditions where it is necessary to lower price for the purpose of selling more units of product. For example, let us suppose, as in Table XIII, column 8, that two units can be sold for \$13.00 each; total receipts are, therefore, \$26.00. But in order to sell three units, price must be reduced to \$12.00, a total revenue of \$36.00. *The \$12.00 received from the sale of the third unit is not a net addition to total receipts.* This is because the gross revenue on the first two units has been reduced by \$2.00 (they formerly sold for \$26.00, now they bring only \$24.00). Such loss of income on the first two units must be deducted from the price of the third in order to arrive at the marginal revenue. In our example it is $\$12.00 - \$2.00 = \$10.00$. In Table XIII

TABLE XIII
MARGINAL COST AND MARGINAL REVENUE

Number of units	Total cost	Marginal cost	Price constant				Price diminishing			
			Price*	Total revenue	Marginal revenue	Net profit	Price*	Total revenue	Marginal revenue	Net profit
1	2	3	4	5	6	7	8	9	10	11
1	\$10.00	\$....	\$6.00	\$ 6.00	\$....	-\$4.00	\$14.00	\$14.00	\$.....	\$ 4.00
2	17.00	7.00	6.00	12.00	6.00	- 5.00	13.00	26.00	12.00	9.00
3	21.00	4.00	6.00	18.00	6.00	- 3.00	12.00	36.00	10.00	15.00
4	23.00	2.00	6.00	24.00	6.00	+ 1.00	11.00	44.00	8.00	21.00
5	24.00	1.00	6.00	30.00	6.00	+ 6.00	10.00	50.00	6.00	26.00
6	27.00	3.00	6.00	36.00	6.00	+ 9.00	9.00	54.00	4.00	27.00
7	32.95	5.95	6.00	42.00	6.00	+ 9.05	8.00	56.00	2.00	23.05
8	41.95	9.00	6.00	48.00	6.00	+ 6.05	7.00	56.00	....	14.05

*From the seller's viewpoint, price is equivalent to *Average Revenue*. By way of illustration, at the price \$6.00 (column 4), when two units are sold, his average revenue is \$6.00. When three are disposed of at this price, the average revenue is still \$6.00 ($18 \div 3$). Referring to columns 1 and 8, two units sell for \$13.00 apiece, yielding an average revenue equal to the price. Again, when three units sell for a total of \$36.00 (column 9), the average revenue is \$12.00, which equals the price. Columns 4 and 8 could be headed "Average Revenue" as well as "Price."

the marginal revenue is calculated by subtracting from the total revenue when an additional unit is sold, the previous total.

Marginal Cost and Marginal Revenue.—Marginal cost and marginal revenue together play an all important role in governing the amount which each producer will offer for sale in a given market situation. *All capable entrepreneurs adhere to the fundamental economic principle of expanding output so long as marginal cost is less than marginal revenue.* To do otherwise means failure to secure the greatest possible net gain and may result in actual loss. This can be illustrated with reference to Table XIII. Where the price is constant (\$6.00), profits can be maximized (\$9.05) by placing seven units on the market. Here the marginal cost (\$5.95) is slightly less than the marginal revenue (\$6.00). If six units only were offered, the seller would fail to make the most of his opportunities. Marginal cost here is only \$3.00, considerably less than the marginal revenue. By adding the seventh unit, marginal cost increases to \$5.95, but it is still five cents below marginal revenue. In other words, the addition to cost is five cents less than the addition to revenue; hence the difference between the two (\$0.05) represents the rise in net profits occasioned by selling the seventh unit. On the other hand, if eight units were produced and offered for sale, the net profit would be reduced to \$6.05. This is because the marginal cost now becomes \$9.00, which is \$3.00 greater than marginal revenue. If the producer decided to sell the eighth unit, his net revenue would be decreased by \$3.00. Similarly, it can be shown that with the declining price set forth in Table XIII, column 8, the seller would secure the greatest net profit by putting six units on the market. *Theoretically, every entrepreneur maximizes his gains by increasing his offerings up to the point where marginal cost equals marginal revenue.* Firm A of Table XII would be adhering, as closely as possible, to this principle in offering 420 units at \$1.19 each.

Intra-marginal Producers.—We have seen that the marginal producer will not expand output beyond the point of minimum average total cost. It is otherwise with entrepreneurs who, for various reasons, are in a position to produce at lower average cost. They, like the marginal firm, will extend operations so long as their marginal cost is less than their marginal revenue. But, in such cases, the process of securing maximum profits will lead them to operate beyond the lowest possible average cost of production. This can be demonstrated easily by means of Table XIV.

The figures in Table XIV show the output and costs of an enter-

prise (Firm B) which is 8 per cent more efficient than the marginal producer (Firm A, Table XII). Consequently the total and marginal products of the former are greater than those of the latter, although the cost of the productive agents is the same for both entrepreneurs. Here, again, the least cost combination is achieved when the fourth unit of the variable factor is used. The minimum average total cost is \$1.10 (column 4). Still assuming that the price (or, in this case, marginal revenue) of the finished product is \$1.19, this entrepreneur can augment his profits by expanding production beyond that (\$1.10) point. When he adds the fifth variable unit

TABLE XIV
COST SCHEDULE OF FIRM B
(8 per cent lower average costs than Firm A)

Total product	Marginal product	Total cost	Average total cost	Marginal cost	Value of product (\$1.19 per unit)	Net profit
1	2	3	4	5	6	7
108	...	\$200.00	\$1.85	...	\$128.52	-\$71.68
227	119	300.00	1.32	0.84	270.13	- 29.87
356	129	400.00	1.12	0.78	423.64	+ 23.64
454	98	500.00	1.10	1.02	540.26	+ 40.26
540	86	600.00	1.11	1.16	642.60	+ 42.60
610	70	700.00	1.15	1.43	725.90	+ 25.90

his profits rise from \$40.26 to \$42.60. The cost of adding the marginal product was \$1.16, which is three cents less than the marginal revenue. However, it would not pay the entrepreneur to add a sixth unit because the marginal cost (\$1.43) would exceed the marginal revenue (\$1.19). Thus, we see that in attempting to maximize his profits the marginal producer will choose that level of output at which his average cost is a minimum; *but a lower cost producer will expand beyond his own least cost point.*

The principles governing the policy of the entrepreneur in determining the quantity of output can be represented by means of diagrams. Figure 15 shows the different costs incurred by Firm A (Table XII) in producing varying amounts of product. Costs are measured along the left-hand margin (the y -axis) and amount produced along the bottom (the x -axis) from left to right. The average

fixed per unit cost curve FF descends rapidly at first but slopes more gently as the output increases. The reason for this is easy to understand. For example, when the quantity produced was 100 units, the amount of fixed cost which could be allocated to each unit was $\$100 \div 100 = \1.00 . When the output was, say, 420, the average fixed per unit cost decreased to $100 \div 420 = \$0.24$. The average variable cost curve VV at first slopes downward but reaches a low point and turns upward (Table XII, column 5). The average total cost curve TT has the same general shape as the average variable

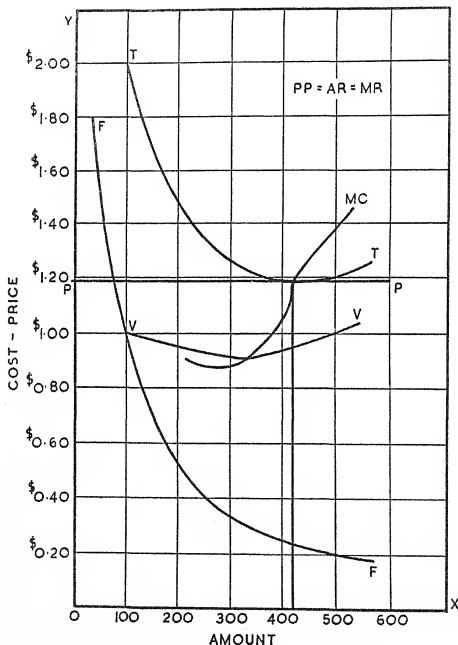


FIGURE 15.—Graphical representation of entrepreneurs' cost principles.

cost curve VV but lies above the latter because it (TT) includes fixed costs.

The marginal cost curve MC , representing the extra cost of adding a unit to total output (Table XII, column 7)⁶ bears a definite mathematical relation to the variable and total cost curves. It will be seen that the marginal cost curve at first declines with the other two then commences to rise while they (VV and TT) are still falling. Furthermore, it cuts both of them at their lowest point. Once the marginal cost curve crosses the average and total cost curves, it rises much more steeply than either of them. A numerical illustration of these relationships now follows.

It is clear that the marginal cost curve will lie below the average variable cost curve so long as the expense of producing an additional unit is less than the previous average. To take an example, if the average variable cost of the first unit is \$1.00 and it costs \$0.60 to add a second unit the new average variable cost will be \$0.80, which, though lower than \$1.00 is still above the marginal cost (\$0.60). Suppose a third unit with a marginal cost of \$0.71 is produced. The marginal cost now commences to rise. The average variable cost will decrease from \$0.80 to \$0.77 but remains higher than the marginal cost. However, as marginal cost continues to increase with greater output, it will eventually equal and then exceed the variable cost. If the fourth unit entails a cost of \$0.77, the average cost remains unchanged (\$0.77). The addition of still another unit of product at a cost greater than \$0.77 would cause the marginal cost curve to cross the average cost curve, thus intersecting it at its lowest point. This is always true. Suppose the production of a fifth unit cost \$0.82. Average variable cost now becomes \$0.78. Consequently, the average cost curve also commences to rise but it lies below the marginal cost curve. Table xv will help to show the relationship between these curves.

The general relationship illustrated in this table holds also for the marginal and average total per unit cost curves. *The former cuts the latter at its lowest point.*

Returning to a study of Figure 15, the position of the marginal entrepreneur is pictured in this chart. On our assumption that the price of the product is \$1.19, he will produce 420 units at which

⁶For theoretical reasons the marginal cost curve has not been drawn to conform strictly to the data in Table XII, column 7. If we were dealing with minute increments of variation, the marginal cost curve would cut the average total cost curve at its lowest point.

output his lowest average total cost is \$1.19. This is also his marginal cost.⁷ He would operate at a loss if output were either greater or smaller than this amount. If he produced, say, 300 units, his average total cost would be approximately \$1.25; thus he would lose six cents in each unit. On the other hand, if output were 550 units, the average total cost would amount to \$1.23, or four cents greater than the price of the product. The line *PP* represents the price or average revenue⁸ (*AR*), also, in this case, the marginal revenue (*MR*). The reader must be careful to observe that the intersection point of curves *MC* and *MR* (*PP*) determines the quantity which the producer will put on the market. This is the diagrammatic way of expressing the fundamental principle that *the entrepreneur will expand production up to the point where marginal cost equals marginal revenue*.

Figure 16 portrays the situation of the more efficient producer whose costs are set forth in Table XIV. The average total and marginal cost curves only are shown. Plainly it will pay this entrepreneur to extend output beyond the point of minimum average total costs. The production of additional units will be profitable so long as marginal revenue is above marginal cost. In Figure 16, 540

TABLE XV

Units produced	Marginal cost	Average variable cost		Movement of curves
		\$	c	
1	....	1 00	}	{ Marginal and average variable cost curves, both declining
2	\$0.90	0 95		
3	0.62	0 84		
4	0.70	0 80.5		
5	0.80	0 80.4	}	{ Marginal cost curve rising, average cost curve falling
6	0.84	0 81		
7	0.95	0 83		
				{ Intersection (practical) of marginal and average variable cost curves
				{ Both curves rising but marginal above average variable

⁷For theoretical reasons the marginal cost curve has not been drawn to conform strictly to the data in Table XII, column 7. If we were dealing with minute increments of variation, the marginal cost curve would cut the average total cost curve at its lowest point.

⁸See foot-note, Table XIII, p. 257, for an explanation of average revenue.

units would be produced. When marginal cost exceeds marginal revenue, net profits are reduced or, if production is extended far enough, actual losses will be incurred.

The cost principles outlined above which govern the policy of enlightened entrepreneurs in respect to the size of their outputs can be summarized as follows: Marginal entrepreneurs expand output

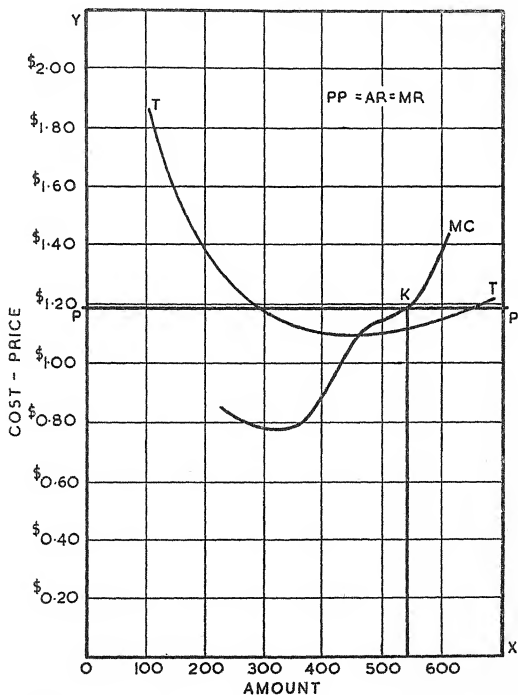


FIGURE 16

to the point of minimum average total costs. Intra-marginal entrepreneurs increase production beyond their own minimum average total cost. Both marginal and intra-marginal producers extend operations up to the point where marginal cost equals marginal revenue.

Opportunity or Alternative Costs.—To any entrepreneur costs of production are the expenses incurred in securing the use of productive resources. As a rule the agents involved in production can be used in various fields of economic endeavour. For example, land can be utilized to grow wheat or corn; labourers can work in factories or on farms; finance capital can be employed in shoe manufacturing or automobile production. Assuming competitive conditions, the costs of production which the business man in a given industry must pay depend upon the amounts which entrepreneurs in other industries are willing to offer for the use of the various production agents. If the rewards offered by the entrepreneur in a given field are very low, the owners of the productive factors have an "opportunity" to secure an income from producers in other industries. The alternative use, or uses, for the factors of production compels the producer of a particular commodity to pay a reward at least equal to that which the agent can command in the next most advantageous use. This payment is known as an "opportunity" or "alternative" cost. If the entrepreneur wants the land for wheat growing, he must pay a rent equal to that which the land would command for corn production. The manufacturer must pay wages equivalent to those offered by the farmer, and people engaged in producing shoes have to pay a rate of interest comparable to that offered by automobile manufacturers. It should be observed that competition tends to equalize "opportunity costs" throughout the economic order. Factors of production will shift from the uses where payments offered are low to these where rewards are higher. This redistribution of resources will result in equality of opportunity costs.

The opportunity or alternative cost principle applies to entrepreneurial ability as well as to other productive agents. A business man who uses his own land plus other forms of capital goods and invests his own finance capital would have to regard as expenses of production the rent and interest which he could have obtained by letting the resources to other entrepreneurs who were willing to pay for their use. These are "opportunity costs." But that is not all. The salary which the business man in question could

have commanded by working for somebody else is also an opportunity cost and must be reckoned as an element in the expense of conducting his individual enterprise. The income which he could have obtained by offering his services to another entrepreneur must be charged against his business in order to determine the "net gain."

A strict application of the "opportunity" or "alternative" cost principle modifies our concept of a marginal producer. Accurately speaking, if an entrepreneur by working for someone else could secure a salary equal to the difference between the sum of his costs (including "opportunity costs" on personally owned resources used in the enterprise) and the income from the business, he could not be regarded as an intra-marginal (or lost-cost) producer. Under such circumstances his average cost of production would be the same as that of other producers in the field. In brief, when the principle of opportunity or alternate costs is applied to entrepreneurial income, all producers tend to be marginal.

Overhead Cost and Size of Output.—In the preceding analysis, it was assumed that price was at least equal to the average total cost at some scale of operation of all entrepreneurs, marginal and otherwise. This is a necessary condition if producers are to remain in business indefinitely. Any concern which sells at a price below its average total cost for an extended period, is headed for bankruptcy. Unless the price increases, it must reduce its costs or go into liquidation. On occasions, business enterprises rely upon bankruptcy and reorganization to scale down their costs.

Although, for successful operation, all expenses of production eventually must be covered by price, in the very short run overhead costs do not enter into the entrepreneur's calculations in regard to the size of the output. There are circumstances under which he will produce for a considerable length of time, even though the selling price is less than his average total cost. By so doing, his losses would be smaller than those incurred if the plant were closed. A study of the table on the next page will make this clear.

Suppose, with reference to Table xvi, that the selling price, as determined by market forces, is \$6.00. This is less than the average total cost (column 6), but is above the average variable costs for certain outputs. Under such conditions, would Firm C continue

TABLE XVI
COST SCHEDULE OF FIRM C

Number of units produced 1	Fixed cost 2	Variable cost 3	Average variable cost 4	Total cost 5	Average total cost 6	Marginal cost 7
1	\$20.00	\$10.00	\$10.00	\$30.00	\$30.00	\$
2	20.00	18.00	9.00	38.00	19.00	8.00
3	20.00	23.00	7.67	43.00	14.33	5.00
4	20.00	26.50	6.63	46.50	11.63	3.50
5	20.00	28.00	5.60	48.00	9.60	1.50
6	20.00	31.00	5.17	51.00	8.50	3.00
7	20.00	36.80	5.26	56.80	8.11	5.80
8	20.00	43.50	5.44	63.50	7.94	6.70
9	20.00	52.50	5.83	72.50	8.06	9.00
10	20.00	64.50	6.45	84.50	8.45	12.00

operating and, if so, how many units would be produced? The answer is that Firm C would continue to operate and produce seven units of product. At the prevailing price (\$6.00), it would derive a revenue of \$42.00 from sales. The total cost of producing seven units is \$56.80 (column 5). The firm thus operates at a loss of \$14.80 (\$56.80 - \$42.00). But if it closed down, the loss would amount to \$20.00 because this is the sum of overhead costs which continues unchanged whether or not the plant is in operation. So long as the entrepreneur can obtain anything above variable costs, he will decrease his losses by keeping the plant running. He will do this till the plant wears out. If, however, the price were less than average variable cost, he would cease operating.⁹ For example, let us assume the price to be \$4.00. At this figure there is no scale of production which would enable the entrepreneur to reduce his losses below the amount of fixed costs. If he produced seven units, his loss would be \$28.80 (\$56.80 - \$28.00). With an output of two, the loss becomes \$30.00 (\$38 - \$8).

Granting that the entrepreneur will continue production even when the price is less than average total cost, we must now see why, in our illustration, Firm C will place *seven units* on the market. This output results in a net loss of \$14.80, which, under the circumstances here portrayed, is the lowest amount to which losses can be reduced. Suppose six units were produced, total revenue (at the price \$6.00)

⁹Unless, of course, he anticipated a rise in price in the immediate future.

would be \$36.00 and total cost \$51.00, resulting in a net loss of \$15.00. On the other hand, if eight were placed on the market, revenue would be \$48.00, cost \$63.50 and net loss \$15.50. This illustrates an application of a principle with which we are familiar. It may be stated as follows: If the price is below average total cost but above minimum average variable cost, the entrepreneur will minimize his losses by producing up to the point where marginal cost equals marginal revenue. In Table XVI, when seven units were produced, marginal cost (column 7) amounted to \$5.80. This is the nearest figure in the marginal cost column to the price (\$6.00), which, in this case, is also the marginal revenue. If the price were \$7.10, eight units would be produced. Thus we see that this principle applied to output holds for any case where price exceeds average variable cost and that in the short run overhead costs do not affect the decisions of the business man in respect to the scale of operations. If, however, the production period is sufficiently long to permit old plants to wear out or new ones to be built, fixed as well as variable costs must be considered by the entrepreneur.

Normal Price.—Over a period of years the price must cover both overhead and variable costs of production.¹⁰ This is known as the *normal price*. Market prices may fluctuate widely from time to time, but there is always a tendency for such quotations to return to the normal. It should be noted that the normal price is not necessarily static in character. A new invention or the discovery of a rich and easily accessible source of raw materials may cause a reduction in normal price whereas prolonged industrial disputes or some other production difficulty may have the opposite effect.¹¹ So long as conditions of demand or supply are subject to change no true *equilibrium* position among producers can be attained.

¹⁰This assumes a period sufficiently long to permit the wearing out of old plants or the creation of new.

¹¹Variations in the price of the productive factors due to changes in the scale of operations will be considered in Chapter XVII.

CHAPTER XVI

COST AND PRICE: CONDITIONS OF SALE

ALTHOUGH normal price tends generally to conform to cost of production, cost analysis of itself is incomplete as an explanation of price determination regardless of the time element. The nature of demand cannot be ignored. Furthermore, the circumstances under which goods are offered for sale must be taken into consideration. In this regard it may be said that, in general, goods are bought and sold under three sets of conditions: pure competition, monopoly, and monopolistic competition.¹

Before attempting to comprehend the significance of this terminology, it is desirable to understand the meaning of two other terms, namely "*perfect*" and "*imperfect*" competition. The expression, perfect competition, is used to designate a situation where there is an abundance, complete divisibility and mobility of productive resources, no scarcity of entrepreneurial ability and, therefore, no possibility of excess earnings. On the contrary, imperfect competition applies to situations where such conditions do not exist; hence there cannot be a ready transfer of productive factors from one use to another. This affords an opportunity for abnormal gains to those already in the field.

Pure Competition.—Broadly speaking, there are three requisites for the buying and selling of goods under conditions of pure competition: (1) a large number of buyers who have no preference for any particular seller or sellers, (2) a large number of sellers so that the contribution of any one of them is only a minute increment of the total supply, and (3) homogeneity of product. Under such circumstances, an individual producer could not affect the price through his influence over supply. For example, the Canadian wheat crop in 1932 was approximately 400,000,000 bushels. A farmer who produced and offered for sale 4,000 bushels contributed

¹For a detailed treatment of this subject, see Edward Chamberlin, *The Theory of Monopolistic Competition* (Cambridge, Mass., 1933); also Joan Robinson, *The Economics of Imperfect Competition* (London, 1933). For briefer less difficult treatment see A. L. Meyers, *Elements of Modern Economics* (New York, 1937), chaps. VII-IX.

merely $1/100,000$ part of the entire crop. Consequently, he would not be in a position to cause a rise in price even if he withheld his entire crop, nor could he depress the price by doubling his output. So far as he is concerned, he can sell all of his crop at the prevailing price. In other words, the demand curve for his individual offerings is infinitely elastic, that is, a straight line parallel to the x axis.

Since the buyers have no preference for sellers other than the price charged for the commodity, it follows that the only kind of competition involved is that of the price type. Any buyer who charges more than the prevailing price will quickly lose his customers and find himself with a stock left unsold. On the other hand, a seller who charges less than the going price will be able to attract all buyers to himself and rapidly dispose of his entire supply. There is, however, no reason why he should do this. In fact, he would be unwise to do so. Since the demand curve for his individual output is a horizontal line, he can dispose of his whole output at the prevailing price. These principles involved under pure competition can be illustrated by means of the following diagrams:

FIGURE 17

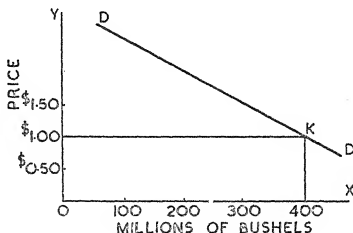


FIGURE 18

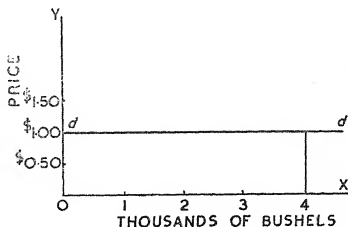


Figure 17 shows the demand for Canada's entire crop of 400,000,000 bushels, which, according to our diagram, can be sold for \$1.00 per bushel. Figure 18 illustrates the demand for the product of one farmer producing 4,000 bushels. It is drawn on a scale one hundred thousand times larger than Figure 17. The demand curve *dd* in Figure 18 is practically equivalent to a point on the larger demand curve *DD* in Figure 17.² So far as this individual producer of wheat is concerned, he can get \$1.00 per bushel whether he sells one bushel or four thousand bushels. His particular contribution does not affect the situation. As explained above, he cannot charge more without losing customers. In strict theory he could not sell even one bushel at a price exceeding \$1.00. As we have seen, he would be unwise to offer his product for less.

The Optimum Size Firm.—A consideration of pure and perfect competition leads to the concept of the optimum size firm, that is, the firm which, from the viewpoint of capacity, is able to produce at the lowest possible per unit cost. This assumes no change in technical knowledge. If it were too small to take advantage of economies resulting from the division of labour, the spreading of fixed expenses over many units of product, etc., the average cost of production would be high. On the other hand, if it were too large for economical management and operation, average cost would exceed that of a smaller, more efficiently operated enterprise. Assuming a wide market and no scarcity of productive resources, difficulties of management would constitute the chief limitation upon its size. The market for automobiles in Canada is not large enough to justify the building of even one automobile manufacturing plant of the technically optimum size.

The optimum size firm must be distinguished from the firm of *most economical* size. The extent of the market sets a limit upon the scale of production. For example, in a large city like Toronto technically optimum street railway facilities might be the most profitable type of plant. In that case it would be also the most economical size. But in a city with the population of Brantford, the optimum size would be unwieldy and uneconomical because it could not be run at its point of maximum efficiency. A smaller plant,

²The community's demand curve, that is, the demand for the entire output, ordinarily slants downward from left to right. Under pure competition the demand curve for the product of an individual seller is an exceedingly small part of the total demand curve and, therefore, for all practical purposes is a straight line parallel to the *x* axis.

though operating at a higher per unit cost than the lowest theoretically possible average cost of a larger firm, is more suitable, more economical, for a community with a comparatively small population. The size of the firm must be "suited" to the size of the market. This principle applies, of course, in all fields of economic endeavour. In some enterprises, for example dairying, many production units of optimum size can function at their most efficient scale and sell in the same market. Such firms are both "optimum" and "most economical" in size.

Under conditions of pure and, at the same time, perfect competition, all firms must be of optimum size and operate at optimum capacity; that is, at the point of lowest possible average per unit cost. Furthermore, each must sell for the same price. A study of the following diagrams will make this clear.

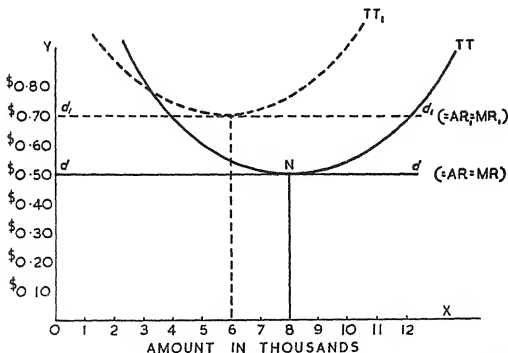


FIGURE 19

In Figure 19 the demand for the product of an individual firm is represented by the straight line dd . The curve TT indicates the average total costs of the optimum firm. The demand curve dd is tangent to TT at its lowest point N . This means that our optimum firm can sell to advantage all it produces at its minimum average cost. In this case 8,000 units can be produced at a cost of fifty cents and sold for that price. The curve TT_1 shows the average total cost of a firm of less than optimum size. Its costs are, there-

fore, higher than those of the most efficient concern, the minimum being seventy cents per unit. Only if some disaster, like a flood or a series of strikes, interrupted production of a large number of optimum firms could the higher cost firm operate successfully. This is because the total supply would be considerably curtailed and the demand curve for the product of an individual firm would rise from the position dd to d_1d_1 .³ The price would now be seventy cents which is equal to minimum average total costs as shown by TT_1 . After the optimum firms resumed their previous output, the demand would decrease once more to dd and the concern with the costs TT_1 would be forced out of business.

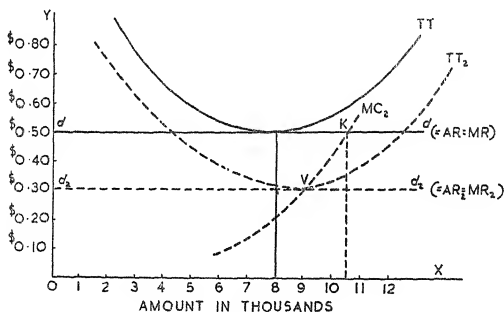


FIGURE 20

In Figure 20, the curve TT is equivalent to TT in Figure 19. It represents the average total costs of the same entrepreneur. Suppose now that as a result of promptness in taking advantage of new methods or through sheer increase in size, another producer is able to put goods on the market at a lower price on account of smaller average unit costs indicated by the curve TT_2 . This is a new optimum firm. What will be the result? In the first place, the new firm will not immediately lower price but will produce for a time beyond the point where its average total cost is lowest. On our

³This is practically equivalent to a point somewhat to the left and higher on the demand curve for the total product DD in Figure 17. If dd were at K , $d_1 d_1$ would be at a point higher than K .

diagram, its output will be 10,500 units instead of 9,000 because of the enhanced gains thus obtainable. Since this firm can produce 9,000 units at an average cost of thirty cents, it makes twenty cents extra profit on each unit. This will stimulate greater production so long as each additional unit produced costs less than fifty cents. In other words, the entrepreneur will increase output until the marginal cost equals marginal revenue. The curve dd in this case is also a marginal revenue curve. In Figure 20 the marginal cost curve MC_2 crosses the curve TT_2 at its lowest point (see above, p. 242) and intersects the marginal revenue curve dd or MR when 10,500 units are produced (i.e., at the point K).

When all producers are operating under conditions of perfect as well as pure competition, improved methods will be available to other entrepreneurs who will proceed to take advantage of them. Furthermore, the extra profit enjoyed by the new optimum firm will entice other producers into the field. This will increase the total supply which cannot be sold at the price fifty cents. The demand for each producer's output will fall to the position represented by d_2d_2 and the goods will then sell for thirty cents per unit.⁴ Every firm of optimum size and operating at optimum capacity can sell its entire output at this price. After all inefficient concerns have withdrawn from the market, the remaining firms will be in a state of equilibrium. When this stage has been reached, price, average revenue, average cost, marginal revenue, and marginal cost will be the same. This is always true when conditions of competition are both pure and perfect.

If competition were pure but imperfect (i.e., the presence of "frictions" due to the cost of transferring from one industry to another, etc.), the firm with the average cost curve TT_2 , Figure 20, would sell for a price above its average cost and make extra profit for a considerable period. The length of time during which abnormal gains are available to this firm depends upon the degree of imperfection of competition.

Monopoly.—Monopoly is the opposite of combined pure and perfect competition. The latter assumes no conscious control over price by either sellers or buyers. The price must be taken as "given." Under monopolistic conditions the seller or the buyer is in a position to influence price as a result of his control over supply or demand as the case may be. Complete control over demand,

⁴The curve $d_2 d_2$ is practically equivalent to a point to the right and lower than K on the total demand curve DD in Figure 17.

which presupposes one buyer only, is comparatively rare in a consumer's market.⁵ Consequently, the term monopoly is commonly used to describe a state of affairs where there are many buyers but only one seller. This presupposes that no close substitutes for the product in question are available.

It should be clearly understood that the monopolist must decide upon the *price* he wishes to charge *or* the *amount* he desires to sell. Once the monopolist places a given amount of his product on the market, its price is determined by the forces of demand and supply like that of goods produced under competitive conditions. The monopolist is not in a position to set a price and then proceed to sell

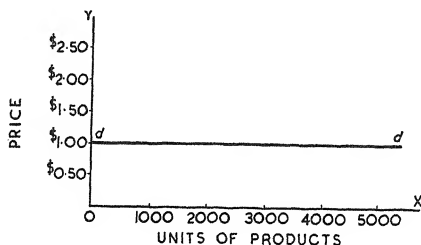


FIGURE 21

an unlimited amount at that price. For example, he may decide to charge \$1.00 per unit and may find that he can sell 20,000 for this price. He could not, however, sell 30,000 at \$1.00 per unit. In order to dispose of the extra 10,000 he would have to lower his price. This brings us to the fundamental difference between the nature of the demand curve for the product of an individual firm when competition is pure and that for the product of a monopolist.

Under pure competition the demand curve for a single producer's output is a straight line parallel to the x axis. Under monopoly the demand curve slants downward from left to right. The reason is easy to understand. Whereas, in the former case, the individual concern's output had no effect upon the price, in the latter the monopolist cannot sell additional units unless he offers them at a

⁵The term "monopsony" is sometimes used to designate a buyer's monopoly. See *infra*, p. 280.

lower price.⁶ The difference between the two types of demand is illustrated graphically in Figures 21 and 22.

In the preceding chart, dd (Figure 21) is the demand curve for the product of a firm operating under pure competition and d_1d_1 (Figure 22) the curve for the product of a monopolist. The former can sell any amount from 1 to 5,000 (or more) units without lowering his price of \$1.00, but under no circumstances can he charge more. The monopolist, however, can sell 1,000 units of his product for \$2.00 each, 2,350 for \$1.50, 3,600 for \$1.00, but can dispose of 5,000 units only when the price is reduced to fifty cents.⁷ It must be clearly understood that the above diagrams represent demand

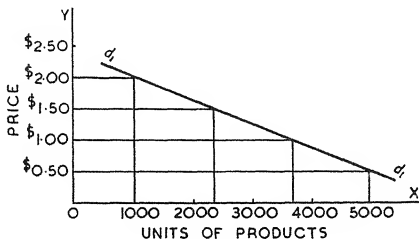


FIGURE 22

conditions for different commodities. Obviously, a good cannot be produced under conditions of pure competition and monopoly at the same time.

Price Policy of the Monopolist.—The question may now be asked: What principles does the monopolist follow in determining the size of his output and the price for which he will sell? A general answer is that he will attempt to arrive at that happy combination of output and price which will maximize his net return. In other words, he will endeavour to secure the greatest possible surplus of total revenue over total costs. In doing this, unlike the producer

⁶Since the demand for the monopolist's product is the community's demand for the entire supply, the curve $d_1 d_1$, Figure 22, is equivalent to the curve DD in Figure 17.

⁷There are some cases of "discriminating" monopoly where the seller can charge higher prices for some parts of his output than for others. See F. B. Garver and A. H. Hansen, *Principles of Economics* (rev. ed., Boston, 1937), chap. XII.

under pure competition, he must take into consideration not only the amount of his total and marginal costs but also the effect which increased output will have upon the price of the commodity. Whereas, under pure competition, the seller could assume that his offerings would have no influence on price, the monopolist, who controls the entire supply, must reckon on a price decline as output expands. His average and marginal revenue diminish as more units are sold. The monopolists' policy can be explained by means of Tables XVII and XVIII considered together.

TABLE XVII

DEMAND SCHEDULE FOR MONOPOLIST'S
PRODUCT

Price per unit (average revenue)	Amount bought	Total revenue	Marginal revenue
1	2	3	4
\$10.00	1	\$10.00	..
9.00	2	18.00	8
8.00	3	24.00	6
7.00	4	28.00	4
6.00	5	30.00	2
5.00	6	30.00	0
4.00	7	28.00	-2
3.00	8	24.00	-4
2.00	9	18.00	-6
1.00	10	10.00	-8

TABLE XVIII

COST SCHEDULE OF MONOPOLIST

Units produced	Total cost	Average cost	Marginal cost
1	2	3	4
1	\$10.00	\$10.00	..
2	15.00	7.50	\$5.00
3	18.50	6.17	3.50
4	22.40	5.60	3.90
5	26.90	5.38	4.50
6	33.00	5.50	6.10
7	42.00	6.00	9.00
8	56.00	7.00	14.00
9	72.00	8.00	16.00
10	90.00	9.00	18.00

Under the assumed conditions of price and costs set forth in the above tables, what quantity will the monopolist put on the market and at what price per unit will it be sold? *The answer, of course, is that he will expand output up to the point where marginal cost equals marginal revenue.*⁸ Each additional unit sold up to this point adds more to the total revenue than it does to total costs. Consequently, in our illustration he will not produce more than four units, the marginal cost of which is \$3.90. These four units will sell for \$7.00 each, or a total revenue of \$28.00. The total cost is \$22.40, leaving a net return of \$5.60.

⁸See *supra*, chap. xv, pp. 256-58.

Is there any other combination of quantity sold and price which would yield a greater profit to the monopolist? Let us assume that he puts five units on the market. Marginal cost is now *above* marginal revenue. The former is \$4.50, the latter \$2.00. The result is that the seller has lost \$2.50 in net receipts by attempting to sell five units instead of four. His return is now only \$3.10. Or, considering it from the standpoint of total revenue and total cost, five units sell at the price \$6.00, yielding a gross return of \$30.00. But the total cost is \$26.90, leaving a net gain of \$3.10. Suppose only three units were offered. They would sell for \$8.00 each or \$24.00. The total cost of producing three units is \$18.50, leaving a net return of \$5.50, which is lower than that obtainable by selling four units. In this case, although marginal cost was less than marginal revenue, the small number of units sold yielded a lower net profit than that resulting from the sale of a larger number (four) when marginal cost and marginal revenue were approximately equal.⁹

In Figure 23, *DD* is the demand curve for the product of a monopolist as given in Table XVII, column 1. This can also be regarded as *the average revenue curve*, which is really the obverse of the demand curve. As a demand curve, *DD* represents the situation from the standpoint of buyers. It indicates the amounts the community will purchase at a series of prices having regard for diminishing utility of the product and differences in taste and purchasing power on the part of the individual buyers. As an average revenue curve, it denotes the amount of revenue per unit the seller receives when varying quantities are sold.

Marginal revenue (Table XVII, column 4) is portrayed by the curve *MR*. It is, as already intimated, derived from the average revenue curve and lies below the latter.¹⁰ Only in the case of pure competition do the average and marginal revenue curves coincide. Since the sale of additional units does not then occasion any fall in price (and, therefore, no loss of revenue on the sale of fewer units at a higher price), average revenue and marginal revenue are identical. Hence, under conditions of pure competition, both average and marginal revenue are represented graphically by the same curve, which is a straight line drawn parallel to the *x* axis.¹¹ In Figure 23,

⁹If the supply were costless, the greatest return would accrue to the seller by putting six units on the market. At this amount, marginal cost and marginal revenue are equal, both being zero.

¹⁰Cf. columns 1 and 4, Table XVII.

¹¹See *supra*, Figures 19 and 20, pp. 271 and 272.

the monopolist's marginal cost of production (Table xviii, column 4) is shown by the curve MC . The curve ATC denotes the average total per unit cost (Table xviii, column 3).¹² In our diagram the curve MC cuts the curve MR at B . Hence, at B , *marginal cost equals marginal revenue*. The monopolist will not produce beyond this point (as marginal cost would exceed marginal revenue) and, therefore, puts the quantity OA (four units) on the market.

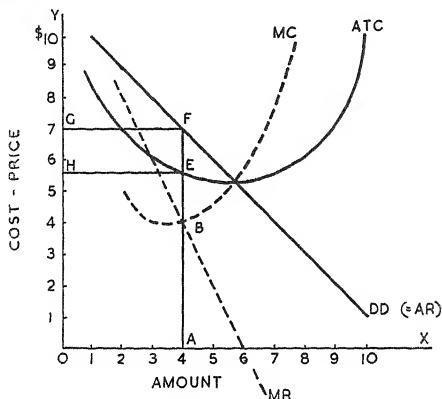


FIGURE 23.—Diagrammatic representation of demand, supply, and price relationships under monopolistic conditions.

The introduction of the curve ATC assists in the diagrammatic representation of the relation between costs, output, prices, and net gains. When the amount OA is offered for sale, AF ($= OG$) indicates the price per unit (\$7.00). AE is the average cost per unit (\$5.60) when the amount OA is produced and EF the profit per unit (\$1.40).¹³ The rectangular figure $OAFG$ is the total revenue (\$28.00) and $OAEH$ the total cost (\$22.40). The net profit (\$5.60) is shown by $HEFG$.

¹²Theoretically MC would cut ATC at its lowest point. See *supra*, p. 261.

¹³It should be remembered that in the very short run the monopolist, like any other producer, will continue production even though selling price is insufficient to cover *all* costs. If he can obtain a price above average variable costs, he would be under incentive to keep his plant in operation. See *supra*, pp. 265-7.

Results of Monopoly.—It will be noted that, under the conditions of demand as pictured in Figure 23, the monopolist is producing at less than optimum capacity (see position of point *E*). He has not expanded output to the point of minimum average total cost. The reason in this case is that he makes a greater gain by following such a policy even though his average per unit cost of production is higher. It can be demonstrated, however, that the monopolist may operate at or beyond the optimum point¹⁴ but he will always sell at a price higher than *his average cost of production*. Consequently, the monopolist never gives society all the benefit, in the form of lower prices, of economies to be achieved by operating at optimum capacity. Nevertheless, this does not mean necessarily that the monopolist charges a higher price than that which would obtain in a situation where an element of competition is present. Under the latter there might be several firms of less than optimum size operating at a higher per unit cost than that experienced by the monopolist even though he were producing less or more than the quantity requisite to lowest average cost.

Monopolistic Competition.—We have seen that, under conditions of pure competition, the individual seller's supply had no effect upon price; whereas the monopolist exercised an influence over price through his exclusive control of supply. Let us now consider an intermediate range of cases wherein goods are sold under conditions of *monopolistic competition*. Here, too, the seller exerts an influence on price. But he does not possess exclusive control of supply because, while it cannot be duplicated exactly by others, competing substitutes of a similar nature can be produced. If sellers are able to attract customers to themselves by means other than that of reducing prices, competition is not pure and an element of monopoly appears. It is a well-known fact that many producers stimulate patronage by means of "the brand and package racket," advertising, performing special services, or sheer force of personality. Under these circumstances customers are drawn to certain sellers by considerations apart from price. They may prefer a highly advertised, packaged article at a particular price instead of that sold in bulk at a lower price although the essential quality may be identical. They may prefer to deal at a certain store where prices are admittedly higher but where they receive personal attention or some form of service not available at others.

While *product differentiation* is the distinguishing characteristic of monopolistic competition, there are special cases based on the

¹⁴Depending on the position of the demand curve.

number of sellers which may be treated under this general heading. These are known as (1) *duopoly*—where there are only two sellers offering a homogeneous commodity—and (2) *oligopoly* where there are a few sellers—with or without product differentiation—competing in the market. Some writers distinguish between duopoly and oligopoly on one hand and monopolistic competition on the other.¹⁵ The basis of distinction is that in the first case (that of duopoly and oligopoly considered together) the seller must anticipate the reactions of his rival or rivals as well as those of consumers when he raises or lowers his price. Whereas, in the second case (monopolistic competition), since competitors are numerous, the seller can disregard them and pay attention only to the influence of a change in price policy upon consumers. Henry Ford must consider the effect of a change in the price of his product not only on the prospective purchasers of cars but on General Motors and Chrysler. In all probability, these competing concerns would readjust their prices to meet any attempt by Ford to capture a greater share of the market through a reduction in the price of his particular product. But, generally speaking, the manufacturer of a branded article like tooth-paste could change his price considerably and virtually ignore the reactions of his competitors. He, of course, would be mindful of the effect upon consumers.

In the case of duopoly and oligopoly the possibilities under dynamic conditions are so varied and the results so uncertain that producers are slow to change their prices. They are fearful of "spoiling the market." Therefore, where sellers are few in number, there is a tendency to stability of prices. Furthermore, selling costs are high because each producer must advertise in order to maintain his share of the market. Product differentiation made known and emphasized by advertising is the chief means of competing. This is true of all forms of monopolistic competition.

On the buyer's side of the market also competition may be absent or greatly restricted. The term *monopsony* is used to designate a situation where there are many sellers but only one buyer. *Oligopsony* indicates many sellers and a small number of buyers.¹⁶ Monopsony is comparatively rare, but market conditions involving a large

¹⁵See Fritz Machlup's excellent article, "Monopoly and Competition: A Classification of Market Positions" (*American Economic Review*, vol. XXVII, Sept., 1937).

¹⁶Monopsony and oligopsony are the counter parts of monopoly and oligopoly respectively.

number of sellers and a small number of buyers are by no means uncommon. An example of oligopsony is to be found in this country among tobacco manufacturers who are few in number and buy from a large group of competing tobacco growers. "Buyers are few," therefore competition in bidding up the price of the raw material ordinarily is not as keen as it would be if "buyers were many."

Production Aspects of Monopolistic Competition.—In so far as a producer under conditions of monopolistic competition exercises an element of monopoly control, he could sell more goods by lowering price. On the other hand, if he raised price he would not lose all of his customers. Herein he differs from the seller where competition is pure because the latter would lose all his custom by raising price above that which prevailed. In other words, whereas the demand curve for the output of an individual seller is horizontal under pure competition, it declines from left to right for the offerings of a dealer under monopolistic competition. As a result the demand curve in the latter case resembles that for the product of a true monopolist, but is generally more elastic owing to the relative ease of others duplicating the product and the availability of close substitutes.

In view of the fact that production under conditions we are now considering contains elements of both competition and monopoly, the consequences as regards cost, output, price, and profit differ somewhat from those of the first two cases. The peculiarities relative to monopolistic competition can be explained best with the aid of diagrams.

Figure 24, which is in substance a reproduction of Figure 23, shows the position of a producer who is first in the field and enjoys the advantages of priority. Note that the amount offered for sale, OA , is such that marginal cost equals marginal revenue. Until competitors appear he enjoys an extra profit represented by $HEFG$. To this extent his position is analogous to a monopolist's. But competitors, lured by these extra gains, eventually enter the market, imitating the product and duplicating the service as much as possible. As a result the original producer loses some but not all of his customers. Hence the demand for his product decreases—the demand curve moves to the left. As long as extra gains above total cost of production are available and additional productive factors are easily secured, more competitors will enter the field. The situation with regard to our original producer after this type of competition has worked itself out is shown in Figure 25. The demand

curve for his product has moved to the left and is now tangent to the average total cost curve ATC at the point N . The extra returns ($HEFG$ in Figure 24) have disappeared and the price $LN=OV$ merely covers cost of production.¹⁷ If the demand diminished fur-

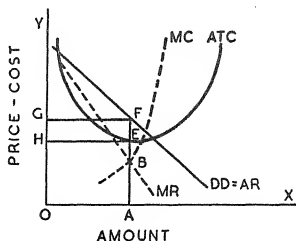


FIGURE 24

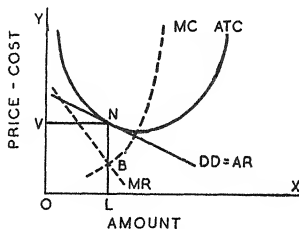


FIGURE 25

ther, he could not remain in business for any extended period as total costs would be above price. If the demand increased, extra gains would reappear, thus inviting further competition until they again vanished. So long, however, as demand and cost conditions persist, as shown in Figure 25, the producer can remain in business indefinitely.

The preceding analysis applies to a state of affairs where competition though monopolistic (in the sense of product differentia-

¹⁷Including, of course, a sufficient return to keep the entrepreneur from closing down.

tion) is also perfect as there are no "frictions" to prevent competitors from entering the industry. If competition were imperfect as well as monopolistic, the demand curve for the product of the original producer would not have shifted so far to the left. In other words, it would not have reached the point of tangency and the producer first in the field would secure some monopoly gain.

Results of Monopolistic Competition.—Several important results relative to monopolistic competition should now be noted. In the first place, as already pointed out, so long as there are no obstacles to entry of others into the field, the seller does not make a monopoly profit, his net return per unit is no greater than it would be if competition were pure. It is quite unlikely that, in actual

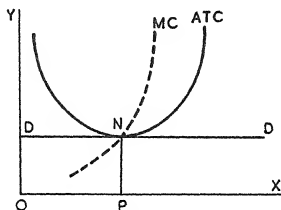


FIGURE 26

practice, this ultimate stage would be reached. Difficulties relative to approximating the product, or securing additional factors of production, and agreements among producers interfere with the competitive process. Competition is then imperfect as well as monopolistic. As a result, all gains above costs do not disappear. In the second place, the plant of each producer is operated at less than optimum capacity resulting in smaller output and higher average cost. (See position of point *N*, Figure 25.) In the third place, as a consequence of the above, the price tends to be higher than that which would prevail under conditions of pure competition when all produce at optimum size and capacity. Figure 26, which is drawn on the same scale as Figure 25, represents the perfect competitive situation. The output *OP* is greater than *OL* in Figure 25. Also the price *NP* is lower than *NL*.

Summary.—By way of summary, it can be said that under all three conditions of production, pure competition, monopoly, and

monopolistic competition, entrepreneurs are under incentive to increase output so long as marginal cost is less than marginal revenue. Where competition is pure, price alone is the method of competing. The demand curve is a horizontal line and under perfect competitive conditions is tangent to the average cost curve at its lowest point. As a result of this, each producer operates his plant at optimum size and capacity and sells an indefinite amount at a price which just covers minimum average total costs. Where monopoly obtains, the seller experiences a slanting demand curve which intersects the average cost curve. He may operate his plant below, at, or above optimum output, depending on demand conditions, and always sells at a price higher than minimum average cost. Where monopolistic competition prevails, other means in addition to price are used to solicit patronage. The demand curve for each individual output is slanting, and if competition is also perfect it becomes tangent to the average cost curve to the left and necessarily above the point of minimum average cost. Therefore, in this stage each producer makes no extra gains above cost of production, operates at less than optimum capacity, and sells at a price higher than that which is potentially possible on the basis of his costs curve. In cases where the product cannot be closely copied and there are other obstacles to the free entry of additional firms, the demand curve will not reach the point of tangency. Here competition is both monopolistic and imperfect and each concern already in the field reaps an extra return. Agreements, tacit or otherwise, among producers will have this effect.

APPENDIX II

NOTE ON ELASTICITY

Elsewhere in this volume elasticity of demand has been described in terms of the slant of the curve, a line parallel to the x -axis indicating perfect elasticity and one parallel to the y -axis absolute inelasticity, with all sorts of gradations between these two extreme forms. Strictly speaking, each point on a demand curve may represent (usually does) different elasticity. Therefore, it is incorrect to speak of an entire curve as being elastic or inelastic except in cases where the curve is of uniform elasticity throughout its length.

It is also possible to consider elasticity and inelasticity of demand in terms of total and marginal revenue. From this approach demand is said to be elastic so long as a lowering of price means greater sales and, as a consequence, some addition to total revenue, or what amounts to the same thing, so long as marginal revenue is positive. Demand is inelastic when

a reduction in price, while leading to increased sales, actually results in a smaller total revenue; that is, the marginal revenue is negative. If a decrease in price results in a greater number of units sold but no change in total revenue—i.e., marginal revenue is zero—the elasticity of demand is *unity*. Otherwise expressed, the elasticity of demand in the first case is *greater than unity* and in the second case *less than unity*. By way of illustration, in Table xvii, p. 276, demand is greater than unity in the price range \$10.00 to \$6.00 inclusive. It is unity at \$5.00 and less than unity from \$4.00 to \$1.00.

CHAPTER XVII

COST AND PRICE: LONG-RUN TENDENCIES

IN our consideration of the individual producer's regulation of output to his own advantage, we assumed (1) a length of time sufficient to permit new firms using the familiar techniques to enter the field or surplus (or inefficient) ones to withdraw, and (2) a much shorter period which did not allow of any such alteration in the number of enterprises and wherein prices did not necessarily cover both fixed and variable costs. In the first case, the price which covered all costs and to which the surviving firms adjusted themselves was referred to as being "normal." It was suggested that, for various reasons, this normal price might change over a long space of time. Thus, we see that three periods of cost and price adjustment can be distinguished: the *short-run*, which does not permit of any extensive alteration in plant facilities; the *intermediate-period*, within which the number and sizes of concerns may be changed in conformity with price conditions; and the *long-run* during which certain forces originating from either the supply or demand side may lead to a considerable variation in normal price, which in turn necessitates a readjustment on the part of entrepreneurs. It is the long-run aspects of change in prices and production which will be dealt with in the following pages.

Factors Affecting Long-run Changes in Costs.—Over a considerable period of time a reduction in costs resulting from an innovation, for example the introduction of a new invention or the discovery of a rich source of raw material, tends to lower normal price, whereas the exhaustion of the supply of some important natural resource will have the opposite effect. Such changes may occur in the absence of any alteration of demand for the finished commodity. Therefore, they can be regarded as emanating almost exclusively from the supply side. It must also be noted that a change in demand which persists over a long term may react upon cost conditions and give rise to a new normal price. In this case, the impetus came from demand. While recognizing the importance of innovations and comparable supply factors in the long-run trend of cost and price, we shall centre our attention mainly upon changes which originate on the demand side. This leads to a consideration of certain forces

affecting costs, some of which arise within a plant or firm and others which are peculiar to the industry as a whole.

Economies and Diseconomies of the Firm.—It has been shown in Chapters xv and xvi that the average cost curve of every business concern is U-shaped. When the output is very small the per unit cost is high, but as the scale of production increases, average cost up to a point decreases, then turns upward. The decline in average cost can be attributed to spreading of overhead expenses over a larger output, better co-ordination of the labour force, more efficient use of equipment, and other internal adjustments.¹ These factors tending to reduce average cost with augmented output are known as *economies of the firm*.

On the other hand, the enlarging of output beyond a certain point develops peculiar economic stresses and strains within the firm which have the effect of increasing average costs. Among these forces leading to decreasing efficiency are: delegation of authority, overcrowding in the plant, improper co-ordination of the labour force and technical equipment. All such factors are really difficulties of management and are known as *diseconomies of the firm*. Any move to enlarge the plant in the direction of the optimum size may be regarded as an economy of the firm, whereas an increase beyond the optimum would be a diseconomy.

Economies and Diseconomies of the Industry.—The forces working within the individual firm making for lower or higher average cost must be distinguished from those operating in a similar way upon the industry as a whole. It is in connection with the latter that long-run changes in normal price originating from alterations in demand are to be observed. If the demand for a given commodity were to increase greatly and remain thus for a term of years, the resulting developments might react upon the average cost of *all firms in the field*. A reduction in average cost available to every firm, quite apart from its internal aspects of organization and management, might result from an enlargement of output to meet the increased demand which, in turn, would lead to greater specialization and, consequently, cheaper materials requisite to production. The growth of subsidiary industries around a main enterprise is a striking example of the process through which economies of the industry arise. This is illustrated in the development of firms to manufacture specialized parts, e.g. electrical equipment, for the large automobile concerns. The factors external to the firm tending

¹See *supra*, chap. ix.

to lower average cost are known as *economies of the industry*. They make it possible for all entrepreneurs who are in a position to take advantage of such economies to sell at lower prices.

But a long-term increase in demand may have the opposite effect upon cost and price. Efforts to augment production in some cases will put pressure upon the sources of indispensable materials. As such resources become scarcer, or less easily procured, their prices will go up, thus causing a *rise in costs to all firms* which make large use of them. A diseconomy of this type might occur if there were a great expansion in demand for a commodity in the manufacture of which nickel is essential. The increasing difficulty of securing nickel as the better sources were used up and the mines became deeper would tend to enhance the average cost of all firms to which nickel is an essential raw material. It is evident that, within limits, a reduction in demand would have effects opposite to those described above.

Constant, Increasing, and Decreasing Cost.—In addition to the two cases just considered, it is conceivable that a change in demand might have no ultimate influence upon cost and price. Hence, production may be carried on under three different long-term tendencies, namely *constant*, *increasing*, and *decreasing cost*. Each of these will be examined briefly from the viewpoint of adjustment of cost, price, and production.

Constant Cost.—In the case of constant cost, the per unit cost of production in the long run remains the same irrespective of the size of the output. The average cost curve of each individual firm, of course, assumes the familiar U-shape. But, assuming perfect competition, any price above that of the lowest average cost will bring new firms into the field which can produce at a cost equivalent of the concerns already operating. Under such conditions all firms would be producing at optimum size and output. A diagrammatic representation of production under constant cost conditions is set forth in Figure 27.

The curve *CC* in Figure 27 represents cost to the industry as distinct from the individual concern. It is the locus of the equilibrium points of each firm in the industry. Under perfect competition it indicates the lowest point on the average total cost curve of all enterprises in the field. As a long-run increase in production does not entail a change in the average cost of production, the curve *CC* is a line parallel to the *x*-axis. In our diagram it shows a cost of \$1.00 per unit regardless of the scale of output. When the de-

mand was as indicated by DD and firms were enabled to produce at a minimum average cost represented by CC , the supply SS was offered and the selling price stood at \$1.00. So long as demand and supply conditions remain thus, 3,000 units would be placed on the market at this price.

Now suppose demand to be permanently increased as shown by the position of D_1D_1 . The immediate effect would be to increase price above \$1.00. But any such price is higher than minimum average cost and would encourage expansion beyond the optimum

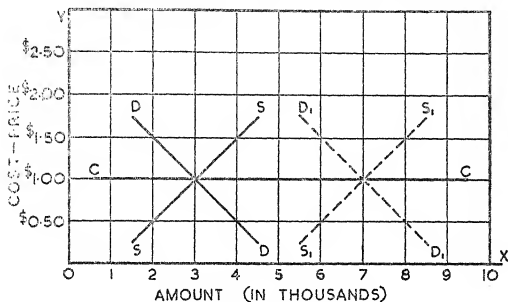


FIGURE 27.—Production under conditions of constant cost.

output of old and the advent of new firms. Eventually, with increased supply equilibrium would be reached as shown by the intersection of the curves D_1D_1 and S_1S_1 . Here 7,000 units will be sold at the former price of \$1.00. All firms remaining in the field must adjust their output and cost to this price.

In actual practice there are few types of business enterprise which conform to the principle of production under constant cost. Of necessity the firm must reach its optimum size rather quickly and this sets a distinct limit upon the scale of operations.² The persistence of internal economies over a long range would be incompatible with this type of production. Examples may be found in

²Of course, additional plants may be constructed and operated under centralized control. But managerial difficulties eventually set a limit to this type of expansion. In this connection a distinction can be made between economies and diseconomies of the *plant* and economies and diseconomies of the *firm*.

industries where labour plays a dominating role and the use of machinery is inconspicuous. Made-to-order clothing and hand-made cigars are produced under conditions of constant cost.

Increasing Cost.—The circumstances under which an expansion of demand will lead to increased per unit cost for all firms in the industry are portrayed in the following diagram:

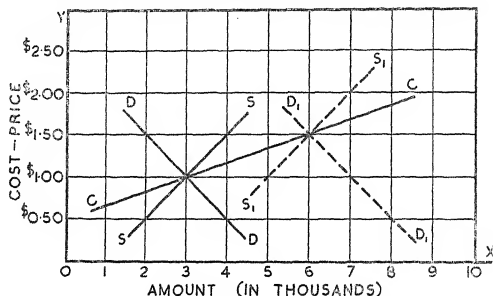


FIGURE 28.—Production under conditions of increasing cost.

Here, too, the curve *CC* represents average cost to the industry. In this case it slants upward to the right, thus indicating a greater per unit cost as the output is enlarged. Under the original conditions of demand and supply (as shown by *DD* and *SS*), three thousand units would be sold at \$1.00 each. After demand increased to the degree designated by *D₁D₁*, the greater quantity placed on the market to meet this new situation could be produced only at enhanced average cost. With an expansion of supply at an average cost represented by *CC*, equilibrium would be reached when six thousand units are produced and sold at the price \$1.50.

It is important to note that with a given increase in demand the expansion in amount produced is not as great here as under circumstances of constant cost and the new normal price is higher than that which originally prevailed (cf. Figure 27). Furthermore, whereas under constant cost all firms have the same minimum per unit cost and sell at a price just covering that cost, in this case there may be firms operating simultaneously with different average cost, though all have the same marginal cost.

It is true, of course, that the average cost to every firm will be raised as output expands. The price of certain raw materials tends to increase for all firms. Those concerns which have peculiar advantages, e.g. a desirable site, or an unusually rich mine, find that their resources are more valuable as a result of enhanced demand. This is equivalent to an increase in their costs as they could lease these facilities to other producers at higher rentals. Despite this general increase in cost, differences of skill, foresight, and judgment among entrepreneurs remain. As a result, some firms are able to produce more cheaply than their competitors. They are intra-marginal producers and enjoy an advantage over the highest cost firms that can remain in the industry.³ When sufficient time elapses to enable producers to bring forth and offer on the market the supply represented by S_1S_1 , the price, as we have seen, will be \$1.50. In the long run every firm must adjust itself to this new price with an output such that its marginal cost equals its marginal revenue. Failure to do this means loss of revenue or, in the case of high cost concerns, elimination.

Agriculture, mining, and lumbering are said to operate according to the principles of increasing cost. A great and prolonged expansion of demand for the products of any one of these industries necessitates the resorting to inferior resources, thus increasing the average and marginal costs of all firms in the field. This assumes the absence of technical improvements and no important discoveries of new sources of raw materials.

Decreasing Cost.—Production under conditions of decreasing cost is portrayed in Figure 29. In this case the average cost of all firms decreases as output expands, a phenomenon which is indicated by the downward slope of curve CC . With the circumstances of demand and supply shown by DD and SS , three thousand units would be produced and sold for \$1.00 each, which is equal to the average cost of production. If the demand curve shifted in a positive direction to the position D_1D_1 and supply also eventually increased to meet the greater demand as represented by S_1S_1 , equilibrium would be established when eight thousand units were produced. *But the selling price would be \$0.50 apiece.* This is lower than the price obtaining before demand and supply expanded. Also the increase in output is greater than that which occurred with

³If the innate superiority of certain entrepreneurs over others is considered an "opportunity cost," then all concerns have the same average cost and all producers are "marginal."

a similar expansion of demand in the case of constant cost (cf. Figure 27).

If *decreasing cost to the firm*,⁴ as contrasted with the industry, could be experienced indefinitely, no true equilibrium could be reached until monopoly had been achieved. The firm which increased its size and expanded its output more rapidly than its competitors would have the advantage. But internal diseconomies cause an upturn in each firm's average cost curve and this, together

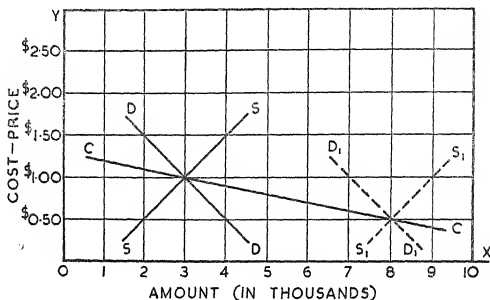


FIGURE 29.—Production under conditions of decreasing cost.

with considerations of optimum size, places a limit upon the scale of output. Transportation is a type of economic endeavour wherein economies to the firm are extensive, hence, there is a strong tendency to monopoly in this field. In many cases an understanding or a "live-and-let-live" policy on the part of a few large competitors results in a pseudo-equilibrium, which may be quite unstable.

While decreasing cost of *the firm* points in the direction of monopoly, decreasing cost of *the industry* does not necessarily have this effect. The latter is available to all concerns. Consequently, a number of firms of optimum size may compete and operate at a scale of output wherein, at the prevailing price, the marginal cost of each would be equal to marginal revenue. Under such circumstances the industry would be in equilibrium. Since external economies are procurable by all, there would be no incentive for any one firm to expand its production facilities with a view to securing greater

⁴Resulting from internal economies (available up to optimum output). Must not be confused with decreasing cost to the *industry*.

economies from outside sources. By so doing, the concern alone would be assuming a risk which, if successful, would benefit competitors as well as itself.⁵

PRODUCTION UNDER CONDITIONS OF JOINT COST

The Meaning of Joint Cost.—There are many cases wherein two or more commodities are produced by a single process, one good cannot be brought forth apart from the other (or others). Up to the point where the articles are separated the cost of production is joint. In other words, it is impossible to ascertain how much of the expenses involved should be allocated to one commodity and how much to another. For example, cotton fibre and cottonseed are produced jointly. There is no method of determining how much of the total production cost should be assigned to the fibre and how much to the seed. The same is true in respect to such commodities as wool and mutton, flax and linseed, butter and buttermilk. In any industry which yields "by-products" the cost of production, in part at least, is joint.

Joint Cost and Price.—Two or more commodities produced of necessity by a single process taken together are regarded as a *joint product*. Once the constituent articles are separated and subjected to specific treatment the joint product gives way to two or more individual commodities. For instance, if we assume that two pounds of cottonseed are produced with every pound of cotton fibre, the *joint product is one pound of cotton fibre and two pounds of cottonseed*. The question now arises as to what determines the price of commodities produced under joint cost.⁶

There are four fundamental principles to note in this connection. *First*, the joint product (e.g., one pound of cotton fibre and two pounds of seed) in the long run must sell at a price sufficient to cover the joint cost of production. Otherwise, the desired supply will not be forthcoming. The appropriate increasing or decreasing cost

⁵In the authors' opinion, a detailed explanation of the various types of adjustment which may occur in the long run under conditions of pure and monopolistic competition is too complicated and technical to be included in an introductory text. For a concise treatment of these several adjustments, see A. MacD. McIsaac and J. G. Smith, *Introduction to Economic Analysis* (Boston, 1936), chap. ix.

⁶If only one of the goods produced jointly will command a price, no special cost-price analysis is necessary. It is, then, merely a problem of the forces determining the price of a single commodity.

analysis should be applied to the production of the joint product. *Second*, the price of each specific commodity depends upon the demand for, and supply of, the same. If the demand for cotton fibre is strong relative to that for cottonseed, the former will be the main product and the seed more or less of a by-product. At one time kerosene commanded a higher price than gasoline, it was the main product and gasoline the by-product. But the advent of the internal combustion engine has reversed the status of these commodities. *Third*, each individual article must sell for a price at least equal to its *separable costs*. That is, the costs involved in preparing each good for the market after it has been separated from the joint product. Such production outlays can be definitely allocated to each article. Whereas the expenses of separating the cotton fibre from the cottonseed are joint costs, those connected with the baling and grading of the fibre are separable costs—they can be definitely assigned to the fibre. Similarly, the expenses of packing and shipping cottonseed are separable costs which can be apportioned to the seed alone. If the price offered for any one commodity were insufficient to cover separable costs, the producer would be under no incentive to place it on the market. *Fourth*, other things remaining the same, a change in the demand for one of two commodities produced under conditions of joint cost will affect the price of both but in opposite directions. This is particularly true where there is a tendency to increasing cost in the production of the joint product as in agriculture. By way of illustration, if the demand for cotton fibre were expanded without a corresponding alteration in the demand for cottonseed, the price of fibre would rise but that of seed would fall. As production of the joint product increased in response to the greater demand for cotton fibre, there would be a greater supply of cottonseed offered on the market which could be sold only at a reduced price. A decrease in the demand for cotton fibre would have the opposite effect.

Deeper Implications of Cost.—The long story of the evolution of value theory from the time of Adam Smith down to the present has seen the testing out, and the modification of, many doctrines. Different authors have made their contributions at various times and their theories have held the centre of the stage for a period only to make way after a time for some new approach. Many such contributions, however, have found a permanent place in the cumulative body of thought which present-day economists acknowledge as meritorious theory. No phase of the subject has received as much

attention, perhaps, as this question of the relation of cost of production to price and the allied question, vital to the first, of what is really meant by cost. In our analysis we have sought to answer various questions concerning costs, but all the time it is merely the business man's conception of cost that we have been using—in other words objective costs—costs in the sense of expenses. Total cost in this sense is the outlay, the sums of money expended, for raw material, labour, interest, taxes, etc.

It should be said, however, that some of the great thinkers have sought to get back of this into something more fundamental. They have sought to base cost upon subjective human experience, even as demand is based upon utility, and measure it in such terms. Thus Adam Smith and David Ricardo spoke of labour cost and Nassau Senior developed the idea of sacrifice involved in the saving of capital. Said Smith, "Labor is the real measure of the exchange value of all commodities. Equal quantities of labor at all times and places may be said to be of equal value to the laborer. Labor, never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared. The proportion between the quantities of labor necessary for acquiring different objects seems to be the only circumstance which can afford any rule for exchanging them for one another." Karl Marx again declared the value of a commodity to be the amount of "socially necessary" labour used in its production. He talked of day's works of the average man, with the average degree of skill and intensity of effort, labouring under normal conditions. With Marx, capital was merely "crystallized labor." Other writers declined to recognize labour as the sole creative factor in production but some insisted, as we have noted, in looking for a sacrifice or abstinence principle behind capital and hence making interest a subjective cost.

When we come to consider cost of production in terms like these, there is less weight in the Austrian contention that the only truly formative influences in price-making are in the consumers' market where subjective utility considerations are being indulged in. There are subjective cost or pain considerations acting on the other side of the market as well. Practically every commodity can be measured in terms of pain or sacrifice involved in producing it. This is its ultimate cost.

While the subjective treatment of cost was dropped during the middle part of the nineteenth century, a refinement of it was re-

introduced by Alfred Marshall toward the close and elaborated by such American economists as Ely, Taussig, and J. B. Clark. At their hands the term disutility is introduced and marginal disutility is set over against marginal utility. Doubtless, it has served a useful purpose to picture the market in terms of an equilibrating of subjective forces. For practical purposes of price explanation, however, it seems rather far-fetched to speak of disutility as connected with sellers in the same sense as we refer to utility as controlling buyers. It is probably closer to fact to think of subjective experience as it applies to the supply side as distributed back across the whole period of production, and inhering in the various persons who have played their part in the productive process. This takes us back into line with the thought of Smith and Marx.

ECONOMIC EQUILIBRIUM

We have seen that in a free enterprise economy the price system acts as a guide to consumption and production. It is the agency which allocates relatively scarce resources among competing fields of economic endeavour. If consumers are willing to pay a higher price than formerly prevailed for a particular article (presumably causing price to rise above production costs), profits in that industry will be augmented. Consequently entrepreneurs attempt to produce greater quantities of this good. In doing so they offer higher rewards to the suppliers of productive agents and thus bring about a reallocation of resources. Competition, then, among both consumers and producers operating through the price system tends to result in a balance of economic forces. This balance is known as economic equilibrium.

Economic equilibrium prevails when no person can improve his economic position by making a change in his present status. With the purchasing power available to them, consumers could not better their lot by using more, less, or a different combination of goods. Entrepreneurs could not enhance their gains by increasing or decreasing the output of their particular products, or by shifting to another field. Labourers could not obtain more satisfactory terms by changing jobs. Providers of capital goods and lenders of monetary funds would find it impossible to secure higher returns than they now enjoy. In other words, the economic order is in equilibrium when no one has any incentive to make a change because such alteration would not improve his position.

Evidently such a condition of static economic equilibrium does not exist in the actual world; it is an abstraction. Nevertheless, it is a useful concept. Static economic equilibrium gives a picture of the ultimate goal toward which economic forces are tending, provided no new factors appear to disturb the process. Whereas in the business world taken as a whole at any particular time the situation is one of *disequilibrium*, the operation of factors in the direction of equilibrium can be seen in many phases of the economic system. In the short-run, the forces of demand and supply tend to result in an equilibrium price, one at which the quantity bought is equal to the quantity offered at that price. The effort of a particular firm to adjust output to the point where marginal cost equals marginal revenue is part of the process pointing to equilibrium. A given firm, if it operates at that point, is in equilibrium even if the price obtained for its product is insufficient to cover both variable and fixed costs. Similarly, under conditions of pure competition, the concern which first introduces improvements and, as a result of which, makes a net gain is in equilibrium so long as marginal cost equals marginal revenue.

But such types of equilibria *within the firm* are temporary in character. In the intermediate period⁷ (when sufficient time elapses for a change in the number of firms) the concern which fails to adjust its total costs to prices disappears from the industry. Again the entrepreneur temporarily securing excess gains under purely competitive conditions loses his advantage as other firms adopt the improved methods. In this case so long as one firm (or even a small number of firms) was making a net gain, the *industry was in disequilibrium*, a condition which eventually would be corrected through competition. Thus we see that it is possible for a firm to be in *equilibrium* (when marginal cost equals marginal revenue) while the industry is in disequilibrium. But this is a temporary phenomenon.

Some economists recognize a condition of partial equilibrium; that is, a state of affairs wherein one industry is out of line with the rest of the economy.⁸ Theoretically this seems to be incompatible with the general equilibrium concept. If any industry finds it necessary to make changes, its process of adjustment would have repercussions throughout the entire economy. In its readjustment the industry affects the quantities of resources available for alternative uses, either bidding production factors away from

⁷See *supra*, p. 286.

⁸McIsaac and Smith, *Introduction to Economic Analysis*, chap. xv.

or releasing them to other industries. This would alter the prices of resources and, therefore, the scale of operations in all fields of economic endeavour. In other words, the adjustment of one industry entails changes in other industries because they are all interrelated through the prices of productive factors. Hence, in so-called *partial* equilibrium, the "rest of the economy" might be in equilibrium at a particular point only *because* one industry was in disequilibrium.

Monopolistic Conditions and Economic Equilibrium.—The existence of monopoly is not inconsistent with economic equilibrium. In the absence of dynamic factors, the absolute monopolist operates at an output where marginal cost equals marginal revenue. This is a state of stable equilibrium not only for the firm but also for the industry, since there is only one concern in the field. Where monopolistic competition prevails it is possible to have stable equilibrium but the elements of stability are not so well defined as in the case of monopoly proper. Large excess gains may induce a potential competitor to produce a substitute product and thus disturb the economic balance which previously existed. Under circumstances where a huge initial capital investment is required this disturbance is not likely to occur. The Kaiser-Frazer Corporation is the first concern in years which has been able to crack the tight, oligopolistic automobile manufacturing industry. A long time may well elapse before another newcomer will appear in this field. But in areas where entry is fairly easy, equilibrium tends to be unstable, as in clothing. In cases where monopolistic elements are present, economic equilibrium does not necessarily mean that productive agents are being used most effectively. If equilibrium for the firms concerned involves a restriction of output so that *profits* may be maximized, the price system does not result in the most desirable allocation and use of economic resources.

Dynamic Equilibrium.—Economic equilibrium can be regarded not only as a static but also as a dynamic phenomenon. Static equilibrium results from an adjustment of the forces operating in the intermediate period of production. During this period available resources are rearranged in conformity with the demand of a given population as expressed in market price. Dynamic equilibrium, on the other hand, refers to the economic adjustments which are made necessary over a period of time on account of changes in size and tastes of population, improvements in production techniques, discovery of new sources of raw materials or depletion of old, and similar alterations in the economic order.

These adjustments are taking place continuously in the long run. True dynamic equilibrium would mean that these adaptations take place simultaneously and harmoniously as the new factors appeared.

As in the static case, it is evident that dynamic equilibrium is an abstraction. It does not prevail in the actual world of affairs. It presupposes an instantaneous adjustment to innovations throughout the entire economy. Dynamic equilibrium, as the term implies, is itself constantly changing. In a new country which is being settled and developed the equilibrium condition would change much more rapidly than in an older more stable nation. The economic system would be in dynamic equilibrium if the process of development were suddenly halted and each person found that he could not make any further change which would be to his economic advantage. For practical reasons no such instantaneous and perfect adjustment to changing conditions is possible. Nevertheless, the dynamic equilibrium concept helps us to understand the interaction of economic forces which prevails over a period. Even if the perfect adjustment is never achieved at a particular time, or even in the long run, forces are constantly operating to bring about such a condition of equilibrium.

To summarize: Economic equilibrium prevails when it is impossible for any individual, either consumer or producer, to make a change which would be to his economic advantage. There are two main types of economic equilibria, static and dynamic. Static equilibrium assumes no changes in population size and tastes, or in production techniques. Under such circumstances equilibrium would be achieved in the intermediate period of production. Forces tending to equilibrium can be seen in the determination of market prices, the efforts of firms to produce at the point where marginal cost equals marginal revenue, and the ingress and egress of firms with respect to various industries. Although pure competition would result in the most desirable allocation of resources, monopoly and monopolistic competition are not incompatible with the equilibrium concept. In contrast to the static case, dynamic equilibrium makes provision for variations in population and other elements of change in the economy. It applies to the long-run period of production and would result from an instantaneous and harmonious adjustment in the economic system as each new factor appeared. Neither static nor dynamic equilibrium obtains in the actual world. But the concepts are useful in helping one to understand the forces at work in our economic order.

CHAPTER XVIII

DISTRIBUTION OF INCOME: WAGES

FUNCTIONAL and Personal Distribution.—Income distribution is considered in economics in two senses: first, *personal* distribution refers to the apportionment of the income of the community among its various members and groups. Analysis along this line is stimulated chiefly by considerations of inequality, social justice, and social policy (including forms of taxation). It is a consumers' interest. Second, *functional* distribution refers to the proportioning of the community income as rewards to, or better, as prices of the services of, the several types of resources used in production for their respective parts in the productive process. Specifically, providers of capital goods are rewarded with rent, labourers sell their services for wages, lenders of financial capital get interest, and entrepreneurs—though their services are not priced like the others—make profits. Analysis following this norm is concerned with the working of the economic process in an exchange order and particularly with the interrelations of distribution (in this sense) and production. Functional distribution operates as a part of the price system where prices are determined by principles similar to those already demonstrated. Exchanges take place, however, in producers' rather than in consumers' markets. Prices established here constitute the costs of production of goods that sell in the other market. They likewise furnish the purchasing power that provides the demand in the latter. Personal distribution, though distinct, will be seen to be inseparably tied up with functional distribution. If we look upon the community income as the net total of the stream or flow of commodities and services produced during a given period—say a year—the share of that stream which will come to any individual must come to him from one or more of these functional sources. He must own capital goods, provide financial capital, perform labour service, or direct industry. He may be drawing from several of the sources at once as, for instance, in the case of the independent farmer or merchant. Personal distribution is affected in addition, however, by gifts and inheritances and by taxation and government expenditures

(other than those made in connection with government productive enterprise). Functional distribution is not affected by these except in the case of business taxes and the like where taxes enter into costs and thus take their place among the conditions precedent to the existing relative sizes of the four income streams. Gifts and income taxes are to be considered as redistribution among persons subsequent to the earlier personal distribution resulting from the functional allocation to persons.

It is well to note that with functional distribution operating through the price mechanism, there is nothing arbitrary or authoritative about it as there might be under other social arrangements. A price mechanism is of itself neither just nor unjust. The worker comes into a goodly share of income if he can sell his labour high over the period. He is less fortunate when wage rates are low. Likewise, the capitalist obtains higher interest on his loans at some times than others. The principles of price determination are to be appealed to again and applied to the price making of the various resources of production. Once more we are to analyse the forces of demand and supply and the influences operating behind them. Functional distribution may be said to involve a special application of price theory. But whereas in the case of consumers' commodities we talk in terms of wants and utility, when we come to consider the price determination of productive resources we find they do not satisfy wants directly: they do not possess utility. Their function is to produce the goods that do have this virtue and the demand for them exists as a result of this ability. It is a secondary or derived demand. In place, therefore, of a jargon of utility, diminishing utility, and marginal utility we shall find ourselves confronted with the corresponding terms productivity, diminishing and marginal productivity of any particular factor. Also, in connection with supply, while there is less variation with respect to terminology the conditions back of supply are peculiar, varying with the different types of resources, and call for special analysis for each factor.

A further feature distinguishing price determination of resource types from the commodity price principles of our earlier chapters arises out of the fact that the former work always in co-operation. Scarcity of any one of them, as has already been explained in Chapter VII, is therefore, for purposes of our present discussion at least, relative to the quantity of the other resources. It was there shown how there is a tendency toward diminishing productivity as more units are added to any one resource type while the others are held con-

stant. It was explained that this fact operating along with changing prices of the different resources places upon the entrepreneur the task of continually changing the quantities of the resources relative to each other, in order to maintain the best proportion among them for productive purposes. Now the additional product resulting from the taking on of an extra unit of any resource is called the marginal productivity of that resource.¹ It follows from the principle of diminishing productivity that as additional units of any productive agent are employed, the other resources remaining constant, its marginal productivity will tend to decrease.

The worth of successive units of any type of resource to an entrepreneur will be determined by the value of the product for which each unit is accountable. We are able, therefore, to visualize an individual demand schedule for each resource for each entrepreneur. Combining these individual demands for any resource, we have the demand schedule for it in the community.

The price of any resource will depend upon the relation of the demand and supply schedules. Where the supply curve of any resource crosses the demand curve, there will the price be found.

This presentation of the automatic operation of functional distribution through the mechanism of pricing resources shows how the latter as well as consumption commodities are held within the whole system of general equilibrium. All commodities equalize at the margin through the operation of buying and selling. It does not imply that "all is well with the world" simply because these equilibrating prices known as wages, interest, etc., exist. In fact, disproportion in the payments going to the various contributing resources probably leads to serious results affecting both the adequacy and the regularity of future production. Low wages, for example, may result in undermining the quality of the working force rather than inducing the adjustment in numbers necessary to wage increase. Social action such as minimum wage legislation brings in a new limiting condition within which the laws of demand and supply shall operate. A new condition of equilibrium affecting the relative amounts and prices of the different types of resources and hence a new distribution will soon work itself out. Functional dis-

¹This must not be taken to imply that the marginal unit of itself produces this extra product value. All production is a co-operative result. Some writers to avoid this and other erroneous implications prefer to use such expressions as "marginal importance" or "marginal utility to the entrepreneur." The older term, however, is well established and therefore preferred.

tribution is thus dependent on institutional conditioning. Such considerations, however, have to do with change and improvement, and the long run. For the present we shall assume the institutional framework as it stands and shall present functional distribution in terms of the pricing process.

WAGES OF LABOUR

The Nature of Wages.—As used in everyday language the term wages refers to payments made by employers to manual or low grade clerical workers where the latter are paid by the hour or the day or the week. Bank clerks and teachers who are hired by the month get "salaries." Salesmen on the road and insurance agents are rewarded with "commissions" on sales. Lawyers, doctors, and some government officials collect "fees." At the hands of the economist, on the contrary, no such distinctions are made. For purposes of his analysis in explaining the principles of distribution they make little difference. He includes also in labour service remuneration such non-contractual elements as allowances to the non-wage earning "gainfully occupied." He also "imputes" wages of management to entrepreneurs including farmers and storekeepers, setting off from the total return to the business an amount equal to what such persons could earn if they offered themselves elsewhere. The aim here is not to break with reality, as this is seen by the average man, but to keep in sight the more fundamental fact, viz. the relationship existing between reward to a productive factor and its contribution to product. Keeping this in mind, it will be readily appreciated that an independent farmer working alongside his hired man is making a contribution through his labour just as truly as is his employee, and that a wage is, therefore, involved. Logically, it would seem that wages should be imputed also to the wives and others in the home—the statisticians' "non-gainfully occupied." This, however, we may not do owing to the indivisible nature of the family unit and the dissociation of these persons from the production-exchange economy. Their contribution to exchange utilities is largely indirect.

Wages, furthermore, take different forms. Usually they are paid in cash, but in some cases, following the method of an older economy they are paid in "kind," as where a villager works for a farmer taking as his remuneration some of the farmer's products. This difference is significant chiefly on account of cash payments

affording freedom of choice in spending to the recipients, whereas payments in kind do not. A more important distinction is that between *time* wages and *piece-work* wages. In the former the worker gets so much per hour, per day, or week, etc.; in the latter he is rewarded in accordance with his output. Paying by the piece is credited with stimulating the worker to a faster effort. On the other hand, it has the disadvantage of causing poorer work in order to get a large amount completed. The tendency seems to be, however, in so far as production of standard products is concerned, for the two methods to bring about much the same remuneration as well as the same accomplishment. Where piece rates are found to enable men to make a higher wage in eight hours than similar men are making on a day wage, more workers will flock to the establishments where piece rates are paid, and competition results in the rate being reduced.² Which method of payment shall be employed is determined largely by the nature of the work. Coal mining is done mainly by the piece. Farm hands are employed by the month or by the day. Commissions and professional men's fees partake of the nature of piece-work payments.

"Profit-sharing" arrangements, where it is agreed that, after a certain basic wage is paid, some percentage of the net profits of firms shall go to the employees at the end of the year, are more in the nature of wages than of profits. The same is true of bonuses handed out without prearrangement.

"Real wages" again are contrasted with "nominal wages." For the most part, when we are talking of wages we refer to nominal or money wages. Mr. So-and-so gets \$40 per week; carpenters are making \$1.10 per hour, etc. Occasionally we are concerned, however, with what the \$40 or the \$1.10 will buy for these workers. Especially when we are comparing wages at two different periods (or two different places), for example between 1913 and the present, to say that carpenters got 70 cents at one time and \$1.10 at another does not tell us much about their comparative economic condition at the two dates. We are interested, then, in knowing what their *real wages* are, the comparative purchasing power of their pay cheques over goods and services at the different times. Studies in

²Various methods of wage payment purporting to be improvements on pure piece rates are now used. Mostly they involve a minimum time-wage guarantee along with the stimulus of a modified piece rate beyond this. See G. S. Watkins and P. A. Dodds, *The Management of Labour Relations* (New York, 1938), chap. xix.

real wages call for the examination of the proportioning of family expenditures, and comparisons between times and places involve, along with these, the use of specially constructed index numbers.

Differences in Contemporary Wage Rates.—The total demand for labour is not of a single strand but consists of many demands for very different types of service. There is little in common between the demand for railway conductors and that for bricklayers, and the provision of the one would not in the least satisfy the entrepreneur who was seeking the other. Likewise *supply* of labour cannot be thought of as a single aggregation of like units of the labour commodity but must be seen as more or less unrelated types of service offered by different groups of individuals who, in the main, are unprepared to offer any other. The whole picture, therefore, is one of many different markets with each a different homogeneous commodity traded in. At any time wages will be found to differ somewhat among these markets owing to conditions of comparative scarcity of labour in relation to the demand of the different types. This differentiation, however, decreases as we descend from the high paid sections of labour toward the low paid "common" type, and in fact the departmentalization into groups fades out at the point where employers, engaged in different lines of production, can satisfy their requirements with the same common type of workers. Why these differing scarcities exist at a particular time is a complex story. Comparative attractiveness of different lines of work may enter in. Absolute scarcity of the talent required for some jobs may explain some differences. Differences in the time and cost of preparing for various types of work may help account for others. But in most cases one reason—and in many cases the chief—is the failure of individuals during the period preceding, to judge aright the coming changes in demand and supply of labour in these different markets. If the wages of carpenters are higher than those of electricians, this will be the chief explanation.

Not only are there different markets dealing in different types of labour but there are also different markets geographically with different wage rates, although the employers involved are selling their product in competition in the same market. This condition is very prominent in Canada. It has its explanation in the various reasons for geographical immobility including cost of travelling, investment in home, community sentiment, language, religion, and other factors contributing to spatial and social distance.

In the wage analysis that follows, we shall tie ourselves to the

consideration of no particular type of labour nor to any particular market, but the observations made concerning demand and supply will have general application, or will on occasion relate more to some types than others.

Determination of Wages: Demand for Labour.—Wages are best explained in terms of demand and supply. The demand for labour is, in the first instance, a demand for commodities and services for the production of which labour is necessary. When demand for particular goods is strong, so likewise is the demand for the labour needed to produce them. When houses, for instance, are in demand, there is a keen demand for plasterers and carpenters; when there is a small demand for buildings many of these tradesmen are unemployed. Why the demand for the different kinds of goods runs through such variations it is not our purpose here to enquire. We accept it as a fact and see it as a primary force operating behind the labour demand schedule.

Some services are directly and entirely a labour product. When prima donnas sing for a price, or when men wash automobiles for one dollar a car, there is little involved of an economic nature except labour. Wages here correspond to the whole service and will be measured by the value of the service to the marginal purchaser. When other men paint cars, and the price settles at eighty dollars per car, capital is involved as well as labour and the result can only be considered a product of the co-operating factors. Of no part can it be said, "this much is due to labour; this, therefore, is wages." The same is true of practically all substantive commodities and the great majority of services. In such cases the demand for labour can only be talked of in terms of the value of the product of the united factors and can only be measured in relation to the importance of labour to that product. How important labour will be, will depend again upon the abundance or scarcity of the other factors as compared with labour. The measurement of its importance is continually being carried on by entrepreneurs, and, as long as labour is mobile, we find the wage rate for any particular class of workers evolving as a by-product of their judgments as they draw upon the labour supply. Consider, for instance, the activities of an entrepreneur who for his labour supply depends mainly upon the unskilled type—say, a steel manufacturer or a contractor building a dam. As he faces the situation at any given time, we can picture him figuring the effect upon output of using varying numbers of men. A certain number may be necessary to operate his plant with

any effectiveness and it will be evident that, up to a point, the taking on of additional workers will result in increasingly large amounts of product per man.³ When that point is passed, however, this condition is reversed: as additional labourers are added there is a decreasing addition to product. This descending condition might be found as follows:

Employee

100	would result in a daily addition to product amounting in value to \$9.00
101	" " " " " " " " " " " " " " " \$8.70
102	" " " " " " " " " " " " " " " \$8.30
103	" " " " " " " " " " " " " " " \$7.80
104	" " " " " " " " " " " " " " " \$7.25
105	" " " " " " " " " " " " " " " \$6.70
106	" " " " " " " " " " " " " " " \$6.10
107	" " " " " " " " " " " " " " " \$5.45
108	" " " " " " " " " " " " " " " \$4.75
109	" " " " " " " " " " " " " " " \$4.00
110	" " " " " " " " " " " " " " " \$3.20

It will be seen we have here the basis of this employer's demand schedule for labour, because the men being all of the same type and capable of substitution, what he pays for the last man hired he will pay for all. Arranged in regular order it would read as follows:

At a rate of \$3.20 per day he would be ready to employ 110 men
" " " " \$4.00 " " " " " " " " " 109 men
.....
" " " " \$8.70 " " " " " " " " " 101 men
" " " " \$9.00 " " " " " " " " " 100 men

Similarly over the competitive area other employers will have their schedules. The market demand is the schedule resulting from the attitudes of all the individual employers. In most markets, in the short run, the number of men called for will be greater as lower and lower wage rates are considered.

To any particular employer the significant task is that of determining when he will stop adding workers. It is evident that this will be where the additional product-value resulting from the presence of the last worker just equals the additional cost of labour. Why this is so and how it works out under the various conditions of competition and monopoly is our next concern.

Maximizing the Revenue from Labour.—The individual buyer of labour is concerned on the one hand with conditions of supply of

³This is a short-run view. In the long run the plant itself is similarly changeable.

labour in the market and on the other with the productivity of the workers and the demand price of their product. The analysis involves consideration of four different cases according to the conditions of the two markets—whether there is competition in one or both or neither.

Consider first (Case 1).—If he is one buyer among many in a market of pure competition, he may assume that the number of men he employs will have no effect upon the price of labour. The supply for him is infinitely elastic with its curve a horizontal straight line. Likewise if he is selling his product in a market of pure competition, he may reckon that his sales whether greater or less will have no appreciable effect on its price. The demand is infinitely elastic and if we were presenting a marginal revenue curve for *units of product* this curve too would be parallel to the x axis. That we are not doing, however, but are concerned with the marginal revenue of *successive units of labour*. And we find the physical product per man is lessening as more men are used, so the marginal money revenue per man will drop, and to a lesser degree the average revenue per man. But in view of all, with prices determined for him in both directions, by forces beyond his control, he will stop employing men at the point where marginal revenue per man equals marginal cost per man. In this case marginal cost per worker (and therefore also marginal revenue per worker) corresponds to the wage. This situation is presented graphically in Figure 30.

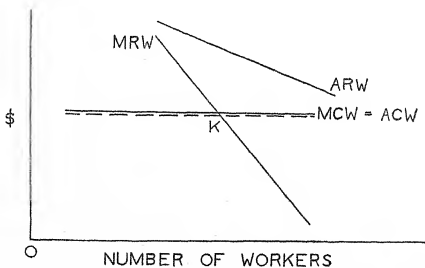


FIGURE 30.—Pure competition in both markets. (Wage = MRW)

(Case 2).—If, however, he is a monopsonist buyer of labour, as he well may be if, say, he is the manager of a pulp mill

situated in an isolated district, but selling his goods in a wide market, or if he is one of a very few buyers, he will realize that the number of workers he takes on will affect the price of labour and consequently what he will have to pay to all he employs. The curve of supply (A.C.W.) will not be horizontal but will slope upward to the right (Figure 31).⁴ He will allow for this, therefore,

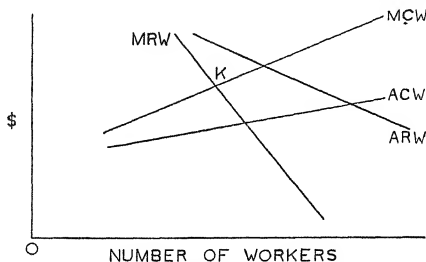


FIGURE 31.—Pure competition in product market only.
(Wage < MRW)

as an element of increasing cost as he uses more men and will be dissuaded from employing so many as in Case 1. In his calculations he will aim at the condition where marginal labour cost equals marginal labour revenue, but now average labour cost (or wages rate) is less than the other two. (Incidentally, he will be stimulated to turn to labour-saving machinery, and also to limit production.)

(Case 3).—Similarly, when he considers the market for his product, if he is a monopolist or is selling under monopolistic competition, he well knows that the volume of his offerings will have a bearing upon price. Here there are three forces tending to restrict the amount of labour hired: wages rising, price of the finished commodity falling, and the amount produced by successive men decreasing (Figure 32). Frequently, though not always, the firm that is important enough in an industry to be capable of practising monopsony or oligopsony as a buyer of labour will be operating as a monopolist or oligopolist in the market for the

⁴If labour is unorganized, presumably it will be smooth though not necessarily even as to slope; if it is organized, the appearance is likely to be jerky and running to plateaux. Recent investigators find that in some cases it swings backward to the left as it mounts. See foot-note p. 318.

product. Knowing that production with a full complement of men will force down his price, he will guard against that eventuality. Looking at both markets he will be concerned with both elasticities, that of supply of labour and that of demand for product.

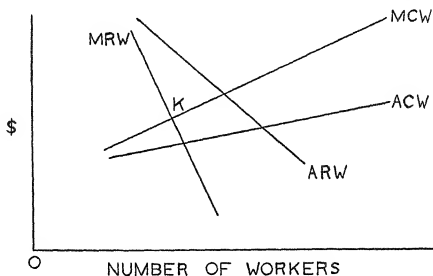


FIGURE 32.—Pure competition in neither market.
(Wage < MRW)

(Possibilities of substitution for labour will also influence him.) If demand for the product is inelastic, he will, other things being equal, limit supply to get a good price, and thus lessen his demand for labour. If supply of labour is inelastic, he will likewise be influenced to employ as little of it as possible. If both demand for product and supply of labour are elastic, he will employ much labour and offer large quantities of product. This is the condition under conditions of monopoly and monopolistic competition which generate a strong demand for labour.

(Case 4).—A fourth case is where the firm is a monopolist in the seller's market but buys his labour under pure competition in the labour market. Here the marginal revenue per worker and average revenue curves are exactly the same as in Case 3 but the marginal cost per worker and average cost are a repetition of those of Case 1. In other words they coincide in a horizontal line which is also the wage curve (Figure 33). At this point it is important to note that it is conditions of monopsony rather than monopoly that cause wage to be less than marginal revenue per worker.

For the full understanding, then, of the behaviour of labour one needs to attend carefully to these marginal aspects. Under all conditions whether competitive or otherwise he will, in the

interest of obtaining the maximum net gain, hire workers up to the point where the additional cost incurred through hiring the last man comes to equal the additional revenue resulting from his presence. Beyond this he will hire no one. This is the general

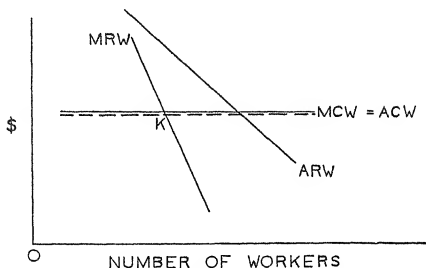


FIGURE 33.—Pure competition in labour market only.
(Wage = MRW)

principle. Obedience to this rule, however, we have seen leads to different results in different situations according to whether selling of product and buying of labour are practised under pure or monopolistic competition and, if the latter condition holds, whether the respective schedules are elastic or otherwise. Table XIX is intended to bring out these differences more exactly as well as the working of the rule. The upper section, *A*, presents the case of competitive conditions in both markets; *B* illustrates the case of the monopsonist or oligopsonist purchasing labour but still selling his product under competition; *C*, shows pure competition in neither market; *D*, competition in the labour market but monopoly conditions in selling the product. Through the four sections, the first four columns are concerned with wage costs while the other six have to do with output and revenue as more and more workers are added. The significant comparisons are between columns 4 and 9 to see where the entrepreneur would stop hiring in each of the four situations, and between columns 3 and 8 to prove each case. Attention to the figures will show that under purely competitive conditions he will stop with the fourteenth man. Under the combination of monopsony and competitive selling of product, he will stop with the eleventh, while under monopoly or monopolistic

TABLE XIX
RELATION OF WAGES AND REVENUE PER MAN, ILLUSTRATING NUMBER OF WORKERS HIRED UNDER
DIFFERENT MARKET CONDITIONS

	1 No. of workers	2 Average wage	3 Total wage	4 Marginal labour cost	5 Output	6 Marginal product	7 Price per unit	8 Total revenue	9 Marginal revenue per worker	10 Average revenue per worker
<i>A</i> (Both markets purely competitive)	9	\$5.00	\$45.00	\$5.00	60	9	\$1.25	\$75.00	(11.25)	\$8.33
	10	5.00	50.00	5.00	68	8	1.25	85.00	10.00	8.50
	11	5.00	55.00	5.00	75	7	1.25	93.75	8.75	8.52
	12	5.00	60.00	5.00	81	6	1.25	101.25	7.50	8.44
	13	5.00	65.00	5.00	86	5	1.25	107.50	6.25	8.27
	14	5.00	70.00	5.00	90	4	1.25	112.50	5.00	8.04
	15	5.00	75.00	5.00	93	3	1.25	116.25	3.75	7.75
<i>B</i> (In pure competition in prod. selling market but imperfect in labour market)	9	5.00	45.00	6.60	60	9	1.25	75.00	(11.25)	8.33
	10	5.20	52.00	7.00	68	8	1.25	85.00	10.00	8.50
	11	5.40	59.40	7.40	75	7	1.25	93.75	8.75	8.52
	12	5.60	67.20	7.80	81	6	1.25	101.25	7.50	8.44
	13	5.80	75.40	8.20	86	5	1.25	107.50	6.25	8.27
	14	6.00	84.00	8.60	90	4	1.25	112.50	5.00	8.04
<i>C</i> (In pure competition in neither market)	9	5.00	45.00	6.60	60	9	1.30	78.00	(9.15)	8.67
	10	5.20	52.00	7.00	68	8	1.25	85.00	7.00	8.50
	11	5.40	59.40	7.40	75	7	1.20	90.00	5.00	8.18
	12	5.60	67.20	7.80	81	6	1.15	93.15	3.15	7.76
	13	5.80	75.40	8.20	86	5	1.10	94.60	1.45	7.28
	14	6.00	84.00	8.60	90	4	1.05	94.50	-1.10	6.75
<i>D</i> (Pure competition in labour market but not in product market)	9	5.00	45.00	5.00	60	9	1.30	78.00	(9.15)	8.67
	10	5.00	50.00	5.00	68	8	1.25	85.00	7.00	8.50
	11	5.00	55.00	5.00	75	7	1.20	90.00	5.00	8.18
	12	5.00	60.00	5.00	81	6	1.15	93.15	3.15	7.76
	13	5.00	65.00	5.00	86	5	1.10	94.60	1.45	7.28
	14	5.00	70.00	5.00	90	4	1.05	94.50	-1.10	6.75

competition in *both* markets, he will stop with the tenth. In *D* he will stop with the eleventh. It is striking how greatly this employer's demand for labour is lessened through knowledge of the fact that wages are affected by him as individual buyer, and prices of product as individual seller, in cases where competition is lacking. Attention to columns 2 and 9 again discloses when wages and marginal revenue per man are equal and when they are not. The whole analysis reveals how marginal revenue per worker (or marginal productivity) determines the wage rate in all cases and under what circumstances it equals the wage rate.

Criticisms of This Demand Analysis.—Certain challenges have been directed against the demand analysis here offered. In the first place it is contended that *practically* this whole picture of the descending productive importance of additional workers to a plant, and consequently the larger picture of additions to the community working force, in correspondence with lower wage rates, is unreal—in fact inapplicable to a large part of industry. A railway company, for instance, would not entertain the idea of adding another engineer to each locomotive, or another conductor to each train, as lower wage rates were considered. There is no series of descending importance in the adding of engineers. The cotton mill owner likewise has a definite number of workers for the adequate operation of *X* looms or *Y* spindles which constitute a working unit. Unless the railway increases its trains it will have no use for more engineers, or firemen, or conductors, and the circumstance of a dollar or less in the wage of the worker will have no appreciable effect upon the number called for. The same is true, it is contended, in most lines of employment. Demand is rather for functioning combinations of labour-and-equipment as units, and for additions of these than for additions of individual workers.

It is far from our purpose to deny this. It must be accepted as a limitation on the applicability of our theory. All we shall offer in the way of counter-offence is to point out that the examples cited by the critics are no more characteristic of industry in general than are those that we have given earlier. In most groups of unskilled labour it is undoubtedly true that the numbers that would be employed at any time would decrease as higher wage rates were considered and the reason would be their descending importance to some employers at least. Furthermore, admitting the truth of the contention that labour demand is tied up with the demand for these functioning units of capital and labour, inasmuch as labour cost is a

large element in the total, it is quite evident that a lowering in it would increase the number of these whole units called for. Certainly, this is true in the building industry for instance, if not so applicable to the running trades in the railways.

A second criticism challenges another assumption, viz. that over much of industry it is wrong to treat with men as if they were all alike even within their own group. Employers distinguish among them and personnel managers are using many techniques, including wage devices, to bring out the best in each man. What are being added, therefore, are really unlike units of labour, rewarded with different amounts of pay. Yet the standard wage anticipating standard performance is still dominant in most industry.

Supply of Labour.—In the study of demand we have seen how entrepreneurs require labour very much as they require other producers' goods in the carrying on of productive enterprise. The demand schedule, therefore, has nothing about it that is particularly distinctive. With supply, however, the situation is different, for this implies the providing of human beings. While to the employer labour service may be viewed in the same light as the service of land or machinery, to the worker who sells the service the matter is looked upon very differently from the way the seller or the lessor of a machine looks upon his sale. In order to give the service, he must associate himself with the conditions that accompany the task. Decisions once made, moreover, are ever subject to reversal if something in the situation fails to please. A machine once contracted for belongs to the entrepreneur. It may be used without question until it breaks, wears out, or becomes obsolescent. Not so the worker. He may leave with or without cause, or if he stays he may practise "slowdown" or refuse to work longer than certain hours. Labour supply, therefore, since the days of slavery, involves psychological determinants unknown to supply of other commodities or factors. Sometimes, too, it organizes.

Individual vs. Collective Selling of Labour.—The seller of labour practising individual bargaining with the employer can in most cases have no effect upon the wage rate. Offering or withholding his single service at any considered price would make no appreciable difference. He sells, therefore, or does not, at the going rate of wages. Exceptions to this are found in those cases where sellers of a particular skill are few in number as in the building trades in a small town or where a person has set himself off from the larger group through some particular excellence. When workers, how-

ever, move together by means of "collective bargaining," the case is different. Here the trade union or other organization through controlling all or large sections of the labour group involved is conscious that it affects the price. Let us assume for simplicity that all the workers of a group have been employed under the individual bargaining system at a wage of \$40 a week, but now they organize with the intention of obtaining more. What wage will they demand assuming they are contemplating a single standard rate and what numbers will they be able to place at that wage? From our analysis of monopolistic selling of other commodities we would expect them *in view of the slope of the demand curve* to select that price and number that would maximize their total revenue. (Cost would be considered as non-existent inasmuch as it attaches to the persons of the workers.) If the demand curve were well known the decision would be simple.

This, however, is not the kind of calculus the organized workers use. It assumes a singleness of accounting that is not characteristic of the typical organization of workers. It implies that the union is concerned entirely with the total revenue of all its members either concentrated in a fund or distributed evenly among them. Actually organized labour does not think in totals but is concerned with individual wages. If 10 per cent of its members are laid off as a result of the new wage forced upon the employers, these unemployed ones will not receive the benefit of the increase. The increase will go almost entirely to the 90 per cent who survive in employment, and responsibility for the others does not enter into the calculation. Only a few labour organizations pay unemployment relief and the tendency is for those laid off from work to drop from active membership through non-payment of dues. Furthermore, if a labour organization did practise centralized accounting and incorporated a definite continuing membership, it would need in selecting the wage that would result in maximum revenue to take account of unemployment insurance benefits and earnings received by discharged members who turned to substitute occupations. No such unified figuring, however, is indulged in. The united action does normally result in higher wages immediately but less employment. In general it may be said that wage increases are demanded and defined in relation to no short-run theoretic principles of monopolistic selling but rather according to how much individual wages can be obtained at strategic moments. In the long run labour hopes that the increased purchasing power in the hands of those

Cases are not uncommon where men with set standards of living and no ambitions toward saving or more luxurious living, will work only part of the time when wages are good whereas with lower wages they must perforce work steadily. Such examples, however, pertain chiefly to the short run and have been treated as rare. Living standards have been thought too elastic and wants too expansive for them to endure. Yet recent research demonstrates the prevalence of lessening labour supply accompanying wage increases.⁶

Altogether the impression we get is that, outside of certain strongly organized trades, the proportion of the population which has a substantial degree of choice between work and idleness within the ordinary range of wage fluctuations is probably small. So far as the labouring population consists of mature male workers, whose social condition usually involves responsibilities of family support, this is certainly true. The dignity of one's calling and dislike for work at less than \$1.00 per hour, or \$3,000 per year, has little to do with it. Necessity drives them on. Elasticity, such as there is, comes more from the outer fringes of the labour population, viz. women, youths, men of private income, and a certain number who may radiate between contract labour and petty entrepreneurship. Labour supply, in so far as it involves numbers merely, is rather inelastic. The great expansion of workers in World War II affords no contradiction of this.

But the supply of labour service is not entirely a matter of numbers offering. It depends also upon hours in the working day, days in the working week, etc. It depends also on legal holidays. And the concept is scarcely complete without some attention to the rate of work during the hours worked—in other words, the zest and the speed carried into the task. How supply may vary through offering differing length of service per day, assuming numbers of workers to be constant, may be appreciated through an examination of the forces acting on the mind of a typical worker as the day on the job advances. On the one hand, the worker is seen as lured on to work by the money received for each hour. On the other hand, he is tempted to cease by the pain, disutility, or dislike of continuing. Regarding conduct during the first few hours, there is no doubt in most cases what the choice will be. With body fresh and energetic there is little disutility experienced in working. In some cases the

⁶See R. A. Lester, *Economics of Labor*, (New York, 1941), chap. v. Lester (following Paul Douglas) presents the *social* supply curve as swinging to the left as it mounts: also the curve of a monopsonist employer in an isolated community.

man might sooner work than not. On the other hand, the utility of the first units of money received is very high. But as the day wears on and the strain on the muscles and the attention grows, the disinclination to work mounts while the utility of successive dollars falls off, for the first dollars of the day's pay are necessary for the goods vital to the family's existence, whereas further additions may be used on commodities less compellingly necessary. Finally, the time comes—be it the seventh, ninth, or tenth hour—when the utility attached to the money received will no more than equal the disutility experienced through the effort. In other words, expressing it graphically, the rising curve of disutility crosses the falling curve representing the utility of successive unit payments per hour. At this point, the man will cease to work. All this assumes, of course, a degree of mobility and a control of the circumstances whereby a man has the right to quit when he likes with the full assurance that a job will be open for him on the morrow, a condition that rarely exists for the individual employee in modern industry. That it does bear some relation to facts nevertheless where large numbers are concerned is shown by the prominence which unions have given to the demand for a short working day in comparison with other matters. The spokesmen for the union on the occasion of making agreements with employers involving hours, have in mind a rough approximation of the point of equilibrium for their average member between the marginal utility of the payment on the one hand and the marginal disutility of the work on the other.

How the supply schedule for labour service is affected through the number of hours worked per day is not known. For the most part it is thought that with the average man a higher rate of pay per hour will induce more hours of work than a low rate. The curve of disutility lying pretty much the same in the two cases will not meet as soon the higher (though probably more rapidly descending) curve of utility of remuneration when the rate of pay is one dollar per hour as when it is eighty cents. To the degree that this holds true with the whole group of labourers under consideration, its effect will be one making for further elasticity. The supply curve representing only the increasing *hours* per day each man would work as larger rates of pay are considered would have to be blended with the curve representing the increasing *number* of men who would work as larger rates are considered, in order to get a more complete revelation of the full conditions of supply. We have no assurance, however, that the schedule representing hours for all groups will be

of this nature. It may be a force operating negatively—counteracting the elasticity of the schedule of numbers. For many persons, for example,—and perhaps for the aggregate of persons in some whole groups—the appeal of leisure to enjoy more adequately the larger money received at the higher rates would be a force making for shorter days, whereas with low wage rates they would as soon continue at work. Which way the curve will set as it mounts, whether to the right or to the left, will depend upon the nature of the different types of work on the one hand and the appeal of the social environment when off the job on the other. Practically at one point of time the leeway that most workers have in this matter is limited. Hours are fixed by the nature of industry, by custom, and by collective agreement. Only at infrequent intervals is the possibility of choice open.

The relation of *intensity* of labour service as a third aspect of supply, following after numbers and hours, is a topic that might well engage us at length. That it is recognized as important by employers is proven by the fact that many of the latter are deliberately offering daily wage rates in excess of the market. Considerable study has been made of the matter by the practitioners in scientific management in their quest for light on the question of what wage brings about the optimum result. Schedules here would uniformly show some degree of elasticity—the higher wage stimulating some effort in excess of the lower.⁷ How significant it would be, would depend chiefly upon the nature of the work. In some lines of work the speed and the whole pattern of activity are so dependent upon the movement and demands of machinery that the higher wage could bring out little extra product. In others, such as, say, the building trades or repair work, it might do much. Here the control exercised over many groups of workers by unions through limiting speed according to definite rules, operates against the possibilities of elasticity.

To summarize, the supply of labour service is limited in the first instance by the number in the population able and available for work. Secondly, the schedule itself is a complex depending upon

- (a) the proportion of those who are willing to work at various wage rates;

⁷This varying intensity concept, it should be noted, puts a strain on the marginal analysis in that it introduces non-homogeneous units. Pure theory seeks to escape this through offering "efficiency units" of labour rather than hours.

- (b) the amount of time each of these is willing to work at various rates;
- (c) the energy and care they will expend on their work at the different rates.

This resultant supply schedule operating in relation to demand determines the wage rate at any point of time.

Non-monetary Motives.—No mention has been made in this discussion of supply, of the labour effort that is called into existence through the agency of other than monetary incentives. The schedule has been constructed entirely in relation to differential potential prices of the service, as indeed the schedule of every commodity or service in the market must be. Yet work resulting from appeals to patriotism (especially in war time), appeals on behalf of the public welfare, work for art's sake, etc., are not insignificant. In Russia more has been made of this than in America. We have not listed it as a separate constituent of the whole supply complex as it is a condition lying beyond wage analysis. Nevertheless, it is true that considerable work is done without material remuneration, and, of work which is paid for, a considerable part is stimulated in some measure by non-monetary rewards.

CHAPTER XIX

WAGES—(Continued)

LONG-TERM Analysis: Persistence of Some Wage Differentials.—In the long run most of the wage differentials existing between different types of labour at one point in time, referred to above, tend to equalize. If plumbers get more than bricklayers today, the chances are that within a few years the reverse will be true or possibly they will be getting the same. The same is true of other groups where the services represent approximately equal amounts of preparation and call for individuals of about the same degree of ability and culture. There are some wage differentials, however, which persist across the years. Certain types of service continue indefinitely higher than others by reason of persisting scarcity in their supply. In recognition of this, economists have presented the whole body of labour as a triangle divided horizontally into four or five parts according to the scale of wages. In the bottom compartment are the ordinary unskilled workers who carry on the heavy routine tasks. Next are the semi-skilled,—the regular workers of our textile mills, shoe factories, etc., people who man the jobs which call for a training of six months to two years and involve a measure of responsibility. Above these are the skilled workers, the product of longer apprenticeship or more advanced cultural accomplishment, involving heavier responsibility. Here are the finished craftsmen in the building trades, the printers, stenographers, school teachers, and the conductors and engineers on our railway trains. Next are the high-grade mental workers such as administrators and professional men, and finally at the very top a small group of exceptionally talented or favoured people, men and women with a spark of genius or other unusual salable quality—notably great leaders of industry, bankers, ball-players, movie actors, and literary geniuses.

The higher degree of scarcity which attends each of these groups as we proceed upward in the triangle and continues in spite of the stimulus of higher wages is accounted for partly through differences in inborn ability or quality but more frequently through nurture,

guidance, and social support. Probably heredity plays a bigger part in separating from the rest the two groups at the top, and especially the topmost one, than it does with the others. Although remarkable sensory qualities sometimes characterize the high-grade craftsman, there is reason to think that these are not confined to this group but that with the extension of opportunities of continued education and training and the provision of a more stimulating social environment for the youth of the lower groups, these qualities would show there in almost equal proportion.

The more important causal circumstance in this differential wage phenomenon is, without doubt, the economic and cultural complex comprised in the home and its way of life, including the human and educational contacts to which it opens the door and also its financial competence to support a smaller or a larger period and programme of education. For related directly to these wage differentials are standards of living which, as we have observed, are psychological concepts of great power and influence in prescribing lines of conduct. Featuring prominently in these standards is the requirement of preparation of children for life's work with a sufficiency not less than that necessary to maintain them in the economic and social position of their group. This means that the children of skilled tradesmen get more spent on them than children of the unskilled and that they are supported through a longer period devoted to preparation. It means, too, that numbers in the family are controlled, or, if they are not, the too numerous children will have to forgo the nurture and training necessary for their continuance in their parents' class. They will need to seek remunerative work at an early age at the expense of the apprenticeship or continuance at trade school which in the normal expectation is theirs.

The most important factor, therefore, in causing the continuance of these scarcity differentials is *comparative cost of producing* the workers for the different types of service. Since differing standards are the explanation of differing costs, attention therefore centres on standards and what constitute the differences in them among non-competing groups, particularly as these affect cost. It is well to consider, too, as a base of reference for the others, the lowest group of all, which by definition has no standard. It lives at the "minimum of subsistence" which has long ago been described as the condition which will enable the workers "one with another to live and reproduce their kind." It contemplates a set of living costs limited to food necessary to sustain life through childhood and

in maturity, and clothing and housing similarly limited to protection against climatic conditions. Today in countries where compulsory education, child labour legislation, and old age and health insurance are provisions affecting all workers, it is evident that the time-honoured concept has been considerably modified. More than that, the minimum has never been cheap in the social sense as the definition might suggest because life at this level has ever involved high death-rates, limited life-span, and consequent economic wastage. The "minimum of subsistence," estimated as requiring between \$22 and \$25 per week for a family of four in the middle thirties by the Works Progress Administration in the United States, included elements other than those contemplated in the older concept.

Looking to standards, we have little to offer from research directed toward examining the content of the differences between non-competing labour groups.¹ Socially minded investigators have been content rather to lay down certain "ideal" budgets calculated to represent different levels of living and by pricing the various items find the cost of maintaining families at each level.² Perhaps the nearest approximation to a differentiation according to worker groups based on an actual survey is that recently done under the auspices of the National Resources Committee in the United States. From data collected from 300,000 families it was found that "wage-earners'" families averaged \$1,289 income; clerical workers', \$1,901; small proprietors', \$2,547; salaried business men's and executives', \$4,212; independent professional persons', \$6,734; farmers', \$1,289.³

While the principle of cost largely explains the relative scarcity of different labour services, it is not true that there is any exact or even close relation between the wage differential between carpenters, say, and shoe-workers on the one hand and the cost differential in producing the two types. Generally in the past the wage differential between non-competing groups has far exceeded the difference in production costs. Studies on the cash value of university education, for instance, show the returns over the years

¹Valuable independent studies have been made of particular groups such as that of the Ford Automobile workers in Detroit in 1929 by the United States Bureau of Labor Statistics. See *Monthly Labor Review*, vol. xxx, pp. 41-50.

²See, for instance, W. E. Atkins and H. D. Lasswell, *Labor Attitudes and Problems* (New York, 1930); Florence Peterson, *Economics of Labor* (New York, 1947); Toronto Welfare Council, *Cost of Living*, (Toronto, 1939 and 1944).

³See *Consumer Incomes in the United States* (Washington, 1938).

to run well beyond the cost, including not only direct educational expenses but allowing also for wages that normally would have been received during the period of attendance at university.⁴

Influences Lessening the Differential.—Most factors directed to the promotion of democracy inasmuch as they weaken privilege and equalize opportunity tend to lessen the distance between the groups. Prominent among these has been the assumption of the financing of primary and high-school education out of the public purse. Recently we have been going farther through opening school buildings to night classes for adult vocational and cultural education. Some gestures have been made toward financial provision for generous state scholarships in universities. Should we in the future go further with this trend as with the returned servicemen at present, possibly to the point of financing at public expense the entire preparatory effort of our working force up to the point where they show evidence of incapacity for further progress, we shall have gone some distance in cutting down the differential. No mere lifting of the financial burden of formal education, however, would eliminate it.

A second feature making an impression is the recent change in the nature of labour organization. Trade unionism prior to 1933 on this continent applied mainly to skilled workers and tended to develop wage differences between these and the lowlier workers through advancing only the former. The later upsurge of industrial unionism promoting the organization of all the workers in each industry for common bargaining with each employer or group of employers will be an influence for equalization. Until organization becomes much more general than it is today, however, no ironing out of differences over the whole field will take place. Indeed the very condition of effective organization in some sections of workers while none exists in others makes for additional differentials although the lines may be drawn to form a new pattern.

Another positive influence is minimum wage legislation passed by our various provinces and states. By naming minimum figures in various low-paid industries below which workers generally may not be employed, as is done in Ontario, or by naming different minima for men and women, as in British Columbia, or again by government sanction of rates for an industry that have been agreed on as minima by representatives of the parties themselves, our provinces are attempting to lift the lowest wages. Still other

⁴*Quarterly Journal of Economics*, Feb., 1935, article by J. R. Walsh.

features are restriction of immigration, and unemployment insurance, which last in recent years has enabled the worker to refuse extremely low wage offers without fear of starvation. Immigration which is only a part of the total movement of world population (the rest being within the boundaries of the various nations), to the degree that it tends to centralize labour in certain industries like clothing and coal mining and makes for immobility and ignorance, has tended, especially in the United States, to increase the wage differential. On the other hand, considered in the broader aspect, the whole world migration movement is a shifting of individuals and families from low paid industries and areas reaching toward conditions of higher economic standing, and it tends therefore to decrease differentials.

Trends in Wage Rates, Annual Earnings, Real Wages, etc.—

Leaving the distinctions between different sections of labour, we next examine the trends in wages and real wages. Here it is important to note different devices of measurement useful for different purposes. *Wage rates* are not the same as *earnings*. An employer may pay a wage rate of \$1.00 an hour but if his workers put in considerable overtime at time-and-a-half their average hourly earnings will be higher than \$1.00. Statistics showing average hourly *earnings* are calculated by dividing weekly earnings by the number of hours worked in a week. Hence weekly earnings tend to fluctuate more than hourly, registering as they do the numbers of hours worked. Similarly statistics of annual earnings vary with the amount of time worked. High wage rates do not necessarily mean high earnings. Statistics of weekly or annual earnings, it should be understood, however, do not reflect the economic welfare of workers generally, but only that of those who are employed, the averages being calculated by dividing the wage rolls of employers by the number of persons employed on a certain regular day in each month (say the fifteenth).⁵ But whether dealing with rates or earnings nominal wages are changed to real wages by dividing the former by the cost of living.

The trends for both wage rates and annual earnings both nominal and real for manufacturing industry in Canada over the last thirty years are presented in the following table of index numbers:

⁵To measure the welfare of the workers in any industry it is necessary to divide the wage rolls by all the workers dependent upon it whether employed or laid off. See *Economic Welfare of Canadian Employees*, Queen's University Industrial Relations Section, Bulletin no. 4, 1940, ch. 3.

TABLE XX
 INDEX NUMBERS OF WAGE RATES, COST OF LIVING, REAL WAGE RATES,
 ANNUAL EARNINGS AND REAL YEARLY EARNINGS IN
 MANUFACTURING IN CANADA*
 (1935-9 = 100.)

	1 Average Wage Rate	2 Average Annual Earnings	3 Cost of Living	4 Average Real Wage Rate	5 Average Real Annual Earnings
1914	51.6				
1917	64.0	81.7	102.4	62.5	79.8
1920	108.5	118.6	145.4	74.6	81.6
1923	98.1	102.4	120.7	81.3	84.8
1926	98.4	107.1	121.8	80.8	87.9
1929	101.1	111.8	121.7	83.1	91.9
1932	92.2	90.5	99.0	93.1	91.4
1935	92.2	93.3	96.2	95.8	97.0
1938	105.2	102.5	102.2	102.9	100.3
1941	122.1	130.8	111.7	109.3	117.1
1944	150.0	167.7	118.9	126.2	141.0
1946	171.4	163.7	123.6	138.7	132.4

*Wage rates figures are from *Wage Rates and Hours of Labour in Canada*, 1946. Those for earnings and cost of living are from *Labour Gazette*, 1947, p. 951.

Attention to Columns 1 and 4 reveals that average money wage rates have jumped to nearly $3\frac{1}{2}$ times the 1914 figure and real wage rates have doubled. It is obvious that, of the two, real wage rates have run a steadier progressive course mounting less rapidly in war periods and yielding little in times of depression. Column 2 shows the effect of overtime rates in both wars and in the prosperous twenties as also does Column 5. The inferiority of the 1946 annual earnings figure, however, as compared with the wage rate figure reflects probably the shortening work-week rather than suggesting less overtime than during the base period (1935-9).

Real wage and earnings trends in Canada have followed a pattern similar to that of other countries. Britain and the United States have shown similar advances. Going back into the last century, real wages in the United States made only slight gains for thirty years after the Civil War and between 1895 and 1915 they changed even less. During World War I they made a minor gain but in the period 1920-8 they advanced nearly 20 per cent. Subsequently they dropped somewhat owing to the severer slashing of

nominal wages in that country during the depression. Thereafter they rose rapidly, but after the war have felt the impact of the uncontrolled rise in prices, particularly in foodstuffs. While traditionally higher than real wages in Canada they are probably suffering a more severe setback.⁶

The Factors Affecting Real Wage Trends.—These figures indicating changes in real wages over a period of years challenge causal interpretation. Naturally we seek explanation of their advance in the expanse of industry and increased volume productivity per worker. If more is produced, will men not get more? Over long periods there is undoubtedly some rough causal connection but the thesis will not stand close comparisons. The middle nineties, for instance, were afflicted by continuing industrial depression in the United States yet we find real wages making advances. The first decade of the present century was marked by more prosperity and industrial expansion, but real wages barely held their own. Increasing productivity per man, in fact, is likely to be a misleading concept. The man is only one contributing factor in the product-result. The increased productivity per man is frequently due to the use of new and more costly equipment per man and the increase in returns naturally is not attributable largely to him. The entrepreneur we have seen pays him according to his *marginal* productivity, which is another matter.

Invention and Discovery.—Attention turns to invention as a likely source of change in real wages. This must be considered under two heads. First, inventions in consumers' goods, in so far as they do not cause present goods to become obsolete, stimulate desires, and consequently demand for labour to turn out the new products. In answer to the demand for automobiles, radios, etc., thousands of workers have been drawn into the factories, dealers' establishments, and repair shops devoted to their production and maintenance. But do such inventions increase the demand for labour in the total? Our first impression is to think that they do. If there had been no automobile, all the labourers who have obtained work in plants connected with its manufacture could never have found employment in making bicycles and waggons and raising

⁶While our concern is with wages as such, and the forces and circumstances which determine these, it is pertinent in a study of functional distribution to note the proportion of the whole social income going to labour. In the United States since 1913 the percentages of the total ranged within 50 to 54 per cent from 1914 to 1919 and remained consistently between 57 and 59 per cent from 1920 to 1928. This included wages, salaries, pensions, and accident compensation.

horses. We must remember though that desires whether new or old are only desires; they do not constitute effective demand unless purchasing power goes with them. Do inventions like these give rise to new purchasing power? Indirectly they do for they stimulate consumers' demand for finance capital and the latter, we have seen, is not without expansibility. But since in the long run goods and services constitute the purchasing power for other goods and services, increased purchasing power can only come about—if we assume resources are fully employed—as a result of more effective production. The appearance of new forms of consumers' goods, however, *may* make production more effective by stimulating workers to work more, entrepreneurs to find better outlets for their genius, material resources heretofore of little account to take on new uses, and producers' finance capital to find worthy cause for expansion. Affecting us as consumers and as producers there is little doubt that novelties in consumption shake us out of the lethargy of the habitual. There is little doubt that the coming of the automobile did create an increased demand for men across a period of years, or that the challenge of higher education, which seems to have been accepted somewhat suddenly at the beginning of this century by numbers hitherto unparalleled, has created in large degree the condition of its own demand. It is in this sense again that the business of advertising has some claim to the right to call itself constructive.

Somewhat different is the effect upon real wages of invention (and discovery) in the producers' goods realm. The discovery of new mines or timber resources makes labour potentially more effective and, in view of this, stimulates into life supplies of finance capital otherwise non-existent. The immediate effect of a new machine capable of displacing fifty men in a manufacturing plant is evidently to lessen labour demand at that point and probably over the whole field, and consequently to lower wages. Though total income is not lessened, it lowers the proportion as between labour and capital going to the former. But does the demand for labour thus temporarily interfered with fall off permanently or does industry open up at new points to receive workers thus displaced? The answer from history is that the era of inventions of the past hundred and seventy years has shown an increasing demand for labour. Certain observers of events in the period after World War I have challenged complacency with regard to the future, however, by asserting—and supporting the assertion with figures of falling em-

ployment—that this happy effect exists no longer. Theoretically it is demonstrable that to the degree that invention makes possible more effective production, to that degree the social income is increased and in the same measure potential purchasing power for goods and consequently the demand for all the productive factors. But, on the other hand, it is conceivable that the labour-saving quality of the machinery may be so pronounced as to turn a much smaller proportion of the total to the labour factor, and the workers generally will lose on balance. Much depends on the *rate* of the technological change. If it is so rapid as to reduce demand beyond the ability of finance capital and reorganized consumption power to develop compensating demand elsewhere, general disorganization develops and the marginal productivity even of those employed suffers a drop. That real wages did increase during the twenties, the period of unprecedented technological change both in the United Kingdom and on this continent, is significant. More conspicuous than this, however, has been the development of unemployment contemporaneously with high average wages. This points to the new controls over labour supply rather than to changing demand as explanatory of much of the improvement in real wages.

Immigration and Native Increase.—Next, what is the effect on wages of free immigration of working people into a young country? It has been asserted by writers on the subject in the United States that the whole cost of Americanization of immigrants has been borne by native workers whose standards of living have been forced down by newcomers who have been willing to accept lower wages and whose numbers have flooded the labour market. Obviously it is true that fresh supplies of labour, added to those already existing, projected against a constant demand will have the immediate effect of lowering wage rates for those groups meeting the newcomers in direct competition. To the degree that groups are non-competing it may be true, however, that other groups, in this case those higher up in the triangle, will not be affected, or, to the extent that they are, they will be benefited shortly, because the new population as consumers furnish an added demand for their services. Different types of labour furthermore tend to support each other in complementary relation in production, as where day workers require overseers, office staff additions, and repair experts. We thus have the picture of immigrants forcing the native workers up rather than out. We still have the question, however, of the total effect on the great body of labour in the long run and notably the unskilled. Some

have contended that as affecting these also the presence of numbers creates a demand for labour as well as a supply. At present we are witnessing the government moving to permit entry to European "refugees" to further the opening up of our resources. What will be the effect on the wages of Canadians? The answer to this problem is not simple for the interrelations are plural and conflicting. Partly it hinges on the ability to organize effectively men and resources including finance capital. Doubtless there are limits to the *ready* absorption power of any economic society for increased labour. If the rate of working class intake is very rapid the strain on entrepreneurial planning and calculation of future demand for goods may become too great. Even though the fundamental raw resources are at hand to match the labour, and though potential markets should develop naturally to take the products, the task of guiding the whole changing process becomes too arduous and involves too much uncertainty for human leadership to deal with. The effect, therefore, is continuing *oversupply* and poor payment of labour, the one factor that presents itself ready-made to the entrepreneur and that stands defenceless through its inability to withhold its stocks from the market at the lower price ranges. (Accompanying the low wages there is likely to exist in an individualistic economy a condition of actual unemployment.) Partly, again, limitation in capacity to absorb fresh labour at good wages is a matter of lag in discovering and developing markets to take the expanding production. Theoretically there is no problem here. Purchasing power for goods develops automatically during the process of their production through the payments that are made to the various contributing parties. Actually much may, and does, go wrong in this connection and floundering business leaders reach their limits in paying good wages. Value productivity of their workers falls off in spite of wealth of resources and men and the apparent potential possibility of better things. Particularly helpless does the situation become when dependence for disposal of some of the important products is on foreign markets.

Finally, inability to accommodate immigrants without suffering lower wages finds its ultimate reason in the ratio between population and resources of a country. The point comes when, owing to the lack of natural resources, diminishing returns to all labour sets in. This point of "optimum numbers," though difficult to determine, is a reality for any society at a given state of the arts. It involves not only the best "man-land ratio" in the agricultural sense but also

the ratio of population to timber, mineral, sea and power resources, and trading possibilities with other lands. More exactly expressed, it is the point where the product-value added by the last workers employed equals the average value produced by all workers (assuming the proportion between workers and whole population to be constant). Taking in further numbers by a country that has reached this point can be done only at the expense of lowering its standard of living.

Much of what we have said with respect to immigration applies also to native increase in numbers through a high birth-rate. Here, again, it is a matter of organization, markets, and ratio of numbers to resources. In the past, native increase and immigration together have proved too much for Canada's ability to absorb workers at wage levels equal to those in the United States, with the result that a great southbound emigration has taken place. Falling birth-rates and legal restriction of immigration after World War I doubtless had much to do with the increase in real wages in both countries during the twenties.

Another effect on real wages of both immigration and birth-rate operates through age and sex composition of the population at any time. Twentieth-century immigration has meant for Western countries abnormally large proportions of people of working age. Our falling birth-rate in the thirties has resulted in a small population of children and youths as compared with the numbers of workers and aged. Sex composition also affects the proportion between workers and non-workers. Such comparisons, however, are relatively less important probably than are the ratios between population and resources and ability to organize the two.

Labour Organization.—Lastly, but not less important than other controlling factors, has been the influence of trade unions and various forms of legislation like minimum wage laws, social insurance acts, compulsory collective bargaining and industrial standards acts (whereby government takes part in the bargaining activities), and legislation looking to the settlement of wage disputes. Of these, social insurance strengthens labour in its ability to withhold its services when wages are very low. Minimum wage laws require it to do so. Trade unions, while they affect men also in higher wage brackets, are not different in principle. All of them may mean less labour employed immediately though what is employed obtains higher rates. In the long run, through more equitable distribution of purchasing power, the more rapid turnover of funds,

and the increased efficiency of industry, it may happen that more will be employed than formerly and all at higher rates. This opens up the controversy, however, about substitution of machinery for workers as the latter ask for more wages, and the further question of varying elasticity of demand for labour in different situations.

CHAPTER XX

RENT

BASIS of Rent.—Rent is the price paid to the owner for the use of specific parcels of wealth over a period of time. Like wages it is based on productivity or on utilities yielded during the period. That this is so is within the experience of the majority of people. If the productive power of a farm, for instance, is increased through good cultivation, fertilization, and care, it will thereafter command more rent assuming prices of products the same. When the prices of farm products rise, the rents of farms advance even though they may yield no greater physical product than before. If an improvement in transportation makes it possible to market the products of a group of farms with less labour and capital expense than heretofore, their rents will rise even though output and prices remain constant. All these are examples of increased value productivity, and are paralleled by rent increases.

Likewise, some urban business sites rent for more than others because they are more productive, whether for mercantile, office, or manufacturing purposes. A site on the main street is more productive for merchants than one on a side street because more people are moving about there and the chances of selling are therefore greater. The manufacturer is not concerned with numbers of shoppers in his vicinity but superior productivity for him is associated with transportation facilities for bringing in his materials and getting out his products and with proximity to working population capable of supplying him with labourers. But taking into account all types of specialization in use, we find the different lots in various sections and streets of a business district taking on their respective rent values in view of all the competing uses there may be for each lot. With consumers' goods rent goes with the utilities yielded over the period. Some city homes (including house and lot) rent for more than others because their utilities are greater. In the first place, the house may be a better house or the lot larger, but greater utility may rest on causes other than these. The lot may be on higher ground commanding a better view; it may be closer to schools

and churches, or better located with respect to shopping areas; the locality may be freer from noises, odours, and smoke, and marked off from undesirable population elements as neighbours.

Economic Rent.—While rent is a price based on productivity or utility it fails in a changing world to conform exactly to these, especially with contracts of long duration. This true productivity is nevertheless retained as an economic concept even though it is not dealt with in the market. This is known as the *economic rent* of a good as contrasted with contract rent as described above or rent as we usually speak of it.

Theoretically Economic Rents are Universal with Capital Forms.—Though rents are associated practically in our minds only with certain forms of fixed capital and durable consumers' goods, notably factories, lands, dwelling houses, telephones, pianos, gasoline equipment, and certain kinds of machinery, theoretically economic rents are yielded by all kinds of durable goods, wherever investment finds lodging. Where a man owns his own farm, there is economic rent even as there is when he rents it from another. In good accounting, moreover, we impute to it a rent even as we impute to the same man a wage when he labours on the farm. Similarly, there is rent associated with cows or coal as well as with farms and factories. It runs with the productivity of the instrument. Practically, however, there is little point in talking about the rent of a commodity when the commodity itself is entirely used up, i.e. loses its identity in one productive event or in a series of services all complete within the time under consideration. Such a commodity must be purchased outright rather than rented. Rent we think of as associated with partial utilization during a period, with the instrument continuing beyond. We only buy and sell period use of those goods which are relatively durable and which yield their utilities steadily or according to some periodicity which permits the yield to be matched by regular payments.

Rent and Value.—The value of a durable good is simply the present worth of all its future yields. The process of estimating the present value of future incomes flowing from any source is called capitalization. A \$1,000 five per cent bond falling due at the end of three years would involve three annual interest payments of \$50 at the close of each year and one of \$1,000 for principal at the end of the period. The present worth of each payment is less, however, than the actual amount to be paid in the future since the recipient must wait to possess it. How much deduction will be made for this

reason may depend somewhat upon the individual, but in general, we should expect the rate to coincide with the market rate of interest of long-term funds. Assuming this to be 4 per cent, the present worth of the first interest payment would be $\$50 \div 1.04$; that of the second $\$50 \div (1.04)^2$; of the third $\$50 \div (1.04)^3$; and that of the principal $\$1,000 \div (1.04)^3$. The present worth of the bond is the sum of these. Similarly, with the rent of any capital good. The capitalized value of a house expected to last for forty years is the discounted value of all its future rents. Here, however, there is no principal to be included. Depreciation to the extent of 100 per cent is implied and included in the rent payments. If we assume that the rents run without variation across the whole period and amount to \$1,000 per year paid annually, the expression for present worth would be $P = \frac{\$1,000}{1.04} + \frac{\$1,000}{(1.04)^2} + \dots + \frac{\$1,000}{(1.04)^{39}} + \frac{\$1,000}{(1.04)^{40}}$.

With land where the duration of the source is infinite, the expression (assuming income and interest rate the same as above) is $P = \frac{\$1,000}{0.04} = \$25,000$.¹

Determination of Rent: Marginal Analysis.—Before proceeding to the regular market analysis, it will be necessary to draw certain distinctions in line with two of our classifications in Chapter VIII. *First* we must distinguish between goods or instruments which cannot be increased in supply and those which can. For goods that may not be increased in quantity, it is plain that the price of the use, or rent, will be in the long run entirely a matter of demand. It will be determined by the marginal productivity or marginal utility of the existing supply. In the short run it will be determined by the general conditions of demand and supply, since supply is still a schedule with dealers practising withholding for reservation prices, even though stock is absolutely limited. The same rule holds for the short run with goods that can be increased. Rent will be determined by marginal productivity or utility on the one hand and marginal dislike for parting with the good on the other. In the long run, however, with reproducible goods, rent, like price of goods in full ownership, will be governed by cost. For it is obvious that amounts are subject to increase as rent rises and will be forthcoming to the point where the rent (less allowance for depreciation) will

¹For fuller statement consult Irving Fisher, *Elementary Economics*, (New York, 1912), chaps. v-vi.

equal the marginal cost as expressed in interest on the expenditure. If city landlords find that houses are renting in excess of the interest on the cost of building (allowing for taxes and depreciation), they will be stimulated to build more until a balance is established between the two. Precisely what the rent for reproducible goods will be in the long run will depend upon whether the conditions are those of perfect competition, imperfect competition, or monopoly. Consider, for instance, the market for shoe machinery which is, on this continent, a rent market. If the shoe firms are many and the machinery company is a monopoly, the rent will be determined by the latter as it seeks its maximum net revenue in view of its costs and the estimated demand curve for machines with the buyers in competition. For each shoe company the rent will be fixed in advance since the withholding of offers by any one of them alone will have no influence. If both sides of the market were competitive, the rent would be determined according to the conditions of demand and supply in the whole market with no individual on either side having any appreciable influence over price as he sought his maximum gain. The determining factor, however, operating through the offerings of the producers would be marginal cost.

But while rents of reproducible goods are prevented from rising, it is not so true that they can be prevented as readily from falling by withdrawing existing goods from the market. In the very long run, this will be done through the non-addition of new supplies, but in the interim which may be for a period of years, depending on the good, there is little possibility of correcting the situation by actual subtraction from the old stocks. Consider, for instance, the case of pianos in a depressed market. Here the rent will tend to stand well below the cost of production for a considerable period. Given sufficient time for stock to be used up or, possibly, to build up a bigger demand, rent will be raised again to equal reproduction cost, but in the "medium run" it will be governed by the interaction of demand and existing over-supply.

The second distinction we have to make is that between specific use and multiple use goods. With the former, demand for their use will depend entirely upon the market conditions of a single product. Rents will, therefore, be governed entirely from this source in the short run, and for non-reproducible goods, in the long run as well. A case in point illustrative of the latter is rent of wheat land in Saskatchewan. With multiple use goods, the sources of demand being various, rents will be determined by competition among the

different uses. The first floor rent of a down-town building will follow the best business anticipations of many lines of merchandising, finance, and service selling, the space going to the most profitable lines. The rent of farm land in Ontario will tend to follow the market values of the most successful crops.

Limitations on Application of Marginal Analysis.—Labour, we found, consists of several different types, but within the confines of each type we could assume homogeneity and divisibility into identical units. Consequently we were able to account for wages by studying the equal increments and decrements considered by business men and to establish the marginal productivity for each group more or less dissociated from those of other groups. With capital goods, we are not only to meet with an infinite variety of types more or less non-competing but also to meet with difficulty in many cases in applying the technique of equal increments, decrements, and margins. Some capital forms do not lend themselves favourably to such analysis. Once factory plants are completed entrepreneurs cannot make small additions in order to fulfil the requirements of the margin although presumably they do calculate with the marginal principle in view at the time of building; nor can farmers take on additional tractors or binders conveniently when they find the one they purchased last year inadequate. In each case they are confined to the single unit although conceivably they may trade it in for a larger size. We may, however, use this technique over that part of the field where it is applicable and perhaps as a result reduce the problem of the rest. There is no reason why we may not think of shoe manufacturing companies renting additional machines of identical type and stopping at the point where the marginal use of machines brings an additional product value to each firm equal to its yearly price. Similarly the rents of motor cycles, buses, and refrigerator cars may be established, maximum milage for the period perhaps being stipulated in the contract in the case of the first named. So also may rents of bath-house lockers in contracts between beach companies and manufacturers, rents of cows for dairy farming, and even of bags of fertilizer and the various uniform raw materials that go into production. The reason why many goods, both producers' and consumers', do not lend themselves handily to the marginal way of determining their rents, is found chiefly in two or three circumstances. First, owing to lack of homogeneity and divisibility they fail to provide the conditions for equal *unit increments*. A factory building is a unit and may not

be thought of as divisible into a thousand parts of equal productivity of which a greater or less number might be used. It may be added to, of course, but not readily in small increments. Sometimes, again, the difficulty rises from spatial immobility. A fruit grower producing in competition may know that the conditions of the market call for him with his present machinery and storage equipment to farm additional acres but he cannot bring them to his present scene of operations where his fruit-growing land is definitely bounded. Secondly, such goods fail to provide the conditions of equal *decrements*. It should be observed that this is often the case, though the good lends itself to equal unit increments. Machines of a particular type or units of raw material may be added handily enough by an entrepreneur, but where they are by nature specific use goods, if the products resulting from them become less valuable for any reason, the entrepreneur cannot usually withdraw the individual machines or the units of inventory one by one and dispose of them until the marginal balance is re-established. He might do so with his tonnage of coal when he found he was overstocked, but with these others, when he is once committed to investment in them and their installation, he may not easily reduce them. Specific purpose immobility supports spatial immobility and costly inconvenience in making such action impracticable. The same principle is of wide application. A fruit grower may buy young trees in keeping with his best judgment of where the margin is, but when the market turns against his product he may not dig up and sell the trees in order to re-establish his margin under the new condition. Similarly the construction company which has built a number of houses of exactly the same quality and appearance for working families in a town during its boom period cannot dismiss them one by one when the boom breaks. The supply was easy to increase but there is no way that it can be decreased in accordance with maximum gain or minimum loss.

Rent as a Residual.—Granted that it is often impossible to measure the productivity of a capital good over a period *directly*, it is necessary to turn to *indirect* techniques. One commonly used is the method of treating it as a residual. If three agencies, *X*, *Y*, and *Z* contribute co-operatively in the making of a product and we know the costs of using *X* and *Y* during the period, and also the value of the product, it is easy to determine the productivity of *Z* by subtraction. More concretely, let us suppose a man is considering going into business selling gasoline. He can estimate the

approximate sales he may expect on the basis of what has been done during previous seasons on sites similar to those he is contemplating. His margin on each gallon he knows since it is determined for him by quotations of retailing and purchasing prices. He knows furthermore what he must pay for the services of a young mechanic to take charge of each station. Assuming he can estimate the income from sale of oil and minor services, he will be in a position to know how much rent he can afford to pay the oil company for the sites and standard equipment.

Economists have gone to great pains to give exact expression to this indirect determination of rent. The method is to assume as constant the factor whose rent it is desired to measure and to apply successive equal units of the known factors to it (instead of the reverse). The classic example has been the application of successive doses of labour and capital expenditure to the same plot of land, the former being considered variables lending themselves to the small increment method whereas land does not. The returns to successive doses diminish and finally the point is reached where the value of the last application just equals its cost. Since all the doses are interchangeable, the amount paid for the entire variables is, of course, this marginal product multiplied by the number. The rest of the product-value is, therefore, the rent of the land. This is called measuring against the intensive margin of use. Thus in Figure 34, if *A*, *B*, *C*, and *D* represent the product value of successive equal doses of labour and capital to a plot of land and the return from *D* just equals its cost, then the area above the dotted line will represent the rent. Similarly the rent of any large unit such as a house or a factory is said to be determined.

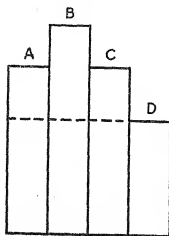


FIGURE 34

Critics of the method have spoken against it on account of the tendency to assume too definite an acquaintance with the so-called "knowns." Frequently there is a lot of estimating about several of the agencies used in the production of a commodity and one is little more of a residual than the others. With respect to wheat growing in Saskatchewan, for instance, it has been argued that little more is known about the right wage to impute to the farmer in a situation where he has no alternative occupations to which to turn than is known about the land rent. When the price of wheat takes a drop on the world market, the shrinkage registers on the value of the man's labour even as it does on the value of the land's service. In such cases, the proportioning of income between contributing agents is somewhat indeterminate.² Such, of course, would not be the case in a country where occupational mobility enabled labour's wage to be maintained through reducing the numbers depending on wheat growing. It would be quite as true, however, if part of the land could be turned to other uses as easily as labour in the event of a drop in the wheat price. In a time of severe unemployment labour may be quite as immobile in this sense as land.

The Differential Method.—Still another approach to rent determination is the method of comparing results with those of other capital goods not the same as this one but which co-operate with other agencies in much the same manner and which produce usually the same product or products. Thus the Ricardian theory of differential rent of land postulated comparison between different grades of land in the growing of corn (the English name for wheat). With the same amount of labour and capital applied to an acre of each, different quantities of wheat are found to result. The superiority in product of the various better lands over the marginal land constitutes their respective rents, whereas the marginal land is without rent. The theory requires the assumption of land somewhere that merely pays the capital and labour cost of cultivation against which all other land rent may be measured. This is spoken of as the extensive margin of cultivation in distinction from the intensive margin mentioned above. Subsequently other writers, in view of the fact that land in most places is not limited to a single crop, enlarged the statement to include superiority to raise crops generally, or better, to produce product-value. (Superiority, it should

²V. W. Bladen, "Theory of Cost in an Economy Based on the Production of Staples" (*The Canadian Economy and Its Problems*, ed. by H. A. Innis and A. F. W. Plumptre, Toronto, 1934).

be understood, refers not to fertility alone but to the complex of fertility and proximity to market.³) Practically this is often a useful device for measuring rents of similarly functioning but unlike instruments. While land has this combination of peculiarities in unusual degree—its measured acres are sufficiently alike in appearance, in purpose, and in methods of cultivation to invite comparison and yet less standardizable than most divisible goods—the same method is frequently in use in making comparative estimates of productivity among machines or tools of different sizes or slightly varying types (cream separators, for example) which may be operated with the *same amount of labour and other capital equipment*. It will be apparent, however, that the method will not apply as handily to measuring rents of capital goods of widely different types inasmuch as they do not lend themselves to “dosing” with the same variables.⁴

Does Rent Enter into Price of Products?—Merchants located on side streets where rents are low often advertise that they can undersell their big competitors on Main Street because of this advantage in their costs. Our analysis of the origin of this differential between their respective rents, viz. difference in productivity

³When we consult the actual conditions involving a plurality of types of land, we find that we are not able to escape the intensive cultivation analysis but rather we meet it again in complex form. If we find, for example, three grades of land under cultivation, *A*, *B*, and *C* of which *A* is the best and *C* the poorest, the latter answering to the requirements of the marginal concept, the actual use of the different grades does not correspond to the idea of the same intensity of cultivation, but what happens is somewhat as follows: when one value-unit of labour and capital is applied to *C*, perhaps three units will be applied to *A* and two units to *B*. The total product-value from the applications to all three types may be ten units. Now it is clear that six value-units have been expended on the whole and that one of these—the one used upon *C*—just paid for itself in product. Likewise, the third unit expended on *A*, being the final one expended, and the second expended on *B*, for the same reason, just pay for themselves. In each case they are units used at the intensive margin of cultivation, and, therefore yield no surplus. The whole surplus, therefore, amounting to four units must be imputed to *A* and *B*, and arises in connection with the expenditure of the earlier units of labour and capital upon them. If we may surmise that the second unit expended on *A* and the first expended on *B* each resulted in two units of product, then the first unit used upon *A* is accountable for three units. The rent of *A* would be three units and that of *B* one unit.

⁴It should be observed with respect to this method again, that its use constitutes no denial of the principle of rent tending to equal the marginal productivity of the capital good. But here all the goods are different goods and each constitutes its own marginal unit.

of the two sites in terms of greater turnover, shows the fallacy involved. It may be that the greater productivity is partly in terms of ability to charge higher prices on Main Street owing to the quality of customers, but this is not necessarily so.

Generally we can accept it as true that high land rents do not lead the way to high prices of products. The causal relation between the two runs the other way and dominates because of the absolute limitation in land supply. Long ago Ricardo taught the people of England that high rents of farm lands were not the cause of the high price of corn and the latter would not be relieved even if the landlords ceased to charge rents. The price of corn went up first owing to increasing population and accumulating purchasing power made possible by new manufacturing and trading, and the better land being a good of absolute scarcity and unable to expand when called upon by the new demand took on increased cultivation instead. The intensive margin receded and its rents went up. In other words each acre became more productive first because of the increase in value of each bushel of product, and, secondly, because of larger numbers of bushels produced from it.

With reproducible capital goods other than land, the answer to the question is quite different. There the rise in price of products would first stimulate rents but this would cause further production of the capital goods which would reduce rents and consequently prices of products, which again would reduce rents. This circle of influences continues until equilibrium is reached.

Influences Affecting Changes in Land Rents.—By far the most important of non-reproducible goods is land (considered in the sense of total supply), though other forms might become absolutely limited through the exhaustion of some natural or human resource necessary to their production. It was the conclusion of the classical economists that land rents must ever rise with the expansion of wealth and population, in comparison with wages and interest, because of this absolute limitation in land supply. It is our purpose now to examine this doctrine.

The most conspicuous causal influence affecting land rents is changing population. Apparently, assuming people are fed and clothed, if there are more people to consume cereals, meats, and fruits and to be provided with raw materials for other goods, more pressure will need to be put upon the landed resources that grow them; more acres will have to be brought into use or those already in use will have to be cultivated more intensively, and in either case rents

will rise. It needs to be pointed out as a matter of historic fact, however, that people in older lands over long periods failed to increase the productivity of their lands and hence population was held in check by high death-rates. Mere pressure of population acting alone is incapable of raising rents generally although it may change their distribution. Increase in numbers in Europe had to wait upon the inventions of the Industrial Revolution.

The significant influence in causing rent increase has been rise in purchasing power which may be accompanied by increased numbers practising the same standard of living as before, or constant or even decreasing numbers with a higher standard of living. In the main, however, rapid increases in agricultural rents have been accompanied by population increase. Constant numbers and increasing standards register their effects on other rents. They make heavier demands on timber and mining resources and building site lands, but also, it must not be overlooked, on areas devoted to cotton, wool, and rubber and those meats and fruits which call for large quantities of land to produce a given amount of nourishment and consumers' satisfaction. Thus high purchasing power per capita will result in the devotion of many acres to produce wheat and mutton which under exploitation by a teeming poor population would be devoted to corn, potatoes, and pork. High living standards also make heavier demands for land for roads, railways and air ports, parks, golf-courses, and other playgrounds.

Evidently, therefore, rents have been raised by both population and purchasing power increase blended together in various ways to affect rents differently at different times and places. But behind these, and permissive of the existence of each, has been *science*—science involving a changing state of the arts—accompanied by an attitude favourable to wealth accumulation. Granted that science has opened the way to greater land productivity, it has remained for customs and fashions of the various peoples, along with considerable chance and caprice, and especially discovery of new consumers' goods, to control the distribution of rent increase among various types and areas of land.

Science has affected rents in different ways. In the first place, it has some accomplishments to its credit in the actual increase of land area through irrigation, the drainage of swamps, development of dyke-lands, and construction of building sites. To this degree it has lowered rents elsewhere, at least for short periods. More important by far have been its successes through improved transportation

in bringing into use areas which formerly were inaccessible. The failure of rents to rise in Great Britain as foretold by the early nineteenth-century economists, the fall in rents in Eastern Canada and New England in the last sixty years, the rapid rise in rents in the Middle West of this continent and more recently in the farther west, are in large measure due to this cause. First, it was the development of the trunk lines of the railways from the Middle West to the seaboard and the establishment of ocean lines of steamships; and, second, the more effective exploitation of the Great Lakes—St. Lawrence waterway system, the completion and better grading of the western roads over the Rocky Mountains, and the building of the Panama Canal, that resulted in this re-alignment of land values. Generally, the effect of improved transportation and communication is to *reduce the differences* in rents of agricultural land over the whole expanding area of competition.

The effect of transportation advances upon urban rents has been similar in some connections, in others quite the reverse. Within each city it has tended to extend the area of attractive residential living farther from the centre. On the other hand, it has heightened the value of centrally located business sites. Considering it in its larger metropolitan aspects, it has caused the rents at the heart of the greatest cities to rise. This results from the greater centralization, and at the same time, the greater mobility of the population in the surrounding districts consequent upon easy transport, the total effect being that both people and goods are assembled at particular points at the centres of metropolitan areas, drawn together by the economic forces of these foci, which, in a large way, constitute the marketing and financial centres for the whole areas. Thus we have Montreal, New York, Chicago, and Winnipeg. An opposite movement is seen, however, in the rents of smaller towns. Here, especially with the coming of the automobile and its commercial relatives, the buses and trucks, small town merchandizing has lessened, and rents have dropped with the fall in the productivity of these smaller trading sites. An influence tending to spread them more widely and to relieve pressure at water and rail centres is the recent development in transmission of hydro-electric power. Hydro also lowers rents on coal mining and petroleum lands.

Through science, again especially in the last two centuries, society has succeeded not only in bringing into use wider areas of land in the distant parts of the earth, but with the use of the same land as before it has learned to produce greater amounts of wealth.

A fair illustration is the discovery of artificial fertilizers by means of which, with the application of no more labour and little more capital than before, a great increase in product has been attained. Of similar nature are all advances in animal culture, improvements in seeds, inventions in farm machinery, rayon production, and discoveries in crop rotation possibilities through the use of such crops as clover, whereby land may be improved in fertility while still in yield, thus obviating the necessity of dry-fallowing. The total effect of all such inventions is to keep rent down in relation to a given population deriving its nourishment and its raw material from a given area, assuming there is no change in the social standard of living. In the realm of urban lands the corresponding advances making for economy in the use of land are the many inventions in the building and building equipment industries which make possible the construction and daily use of high buildings. Such are structural steel with its remarkable tensile qualities, the modern electric elevator, and devices for air circulation and conditioning. Through them a given amount of city land becomes more productive. (Otherwise expressed, the supply of land is increased.)

This suggests that a static population with an unchanging standard of living would have falling rents both urban and rural due to more effective utilization of land. Such a picture of change is, however, an abstraction. In real life unchanging standards of consumption do not accompany progressive change in the productive arts unless held down by increase of numbers.

This leads us to consider the effects of progressive consumption standards upon rents. Plainly the influence here is mainly to increase the demand for land and raise rents. People on a diet of pork, potatoes, and beans, living in cheap houses and wearing cotton clothes, require less acreage to support a family than people with a standard featuring beef and fowl, wheat bread, worsteds and muslins, and larger, better equipped homes. Improved standards, involving as they do more abundant, more varied, and more expensive wealth forms, necessarily call more heavily upon resources generally, and land being the ultimate provider of all raw materials and energies can scarcely escape their influence. It is evident, moreover, from everyday observation, how soil, mine, forest, and water-fall are drawn upon for the fabrication and operation of the new consumption goods like automobiles and aeroplanes that have come to grace our civilization. Yet it is well to guard against over-emphasis of this point. Rayon cloth is not more requiring of land

area than cotton. Motor cars require petroleum, rubber, and iron-ore in greater degree than did horses and waggons but they relieve the pressure on agricultural land for hay and oats to feed the horses. It is to be observed, too, that the newer urban wealth forms rest more upon contributions of machinery and other capital goods than they do upon soil resources. In fact they are in many cases based on the same raw materials as older cruder forms but are the result of lengthier and more expensive fabrication—witness our multifarious breakfast cereals.

We come to the conclusion, then, that population, standard of living, and progress in the productive arts operate in various and compensating ways in their effect on land rents; that the last two work for the most part in opposite directions; that the initial influence making possible the increase of the others has been invention and discovery in the arts; and finally, that progress in one phase of production, viz. transportation, has operated chiefly to distribute rents rather than directly to increase or decrease them in total.

Contract Rent and Revaluation.—It frequently happens that contract rent, where the agreement covers a long period, gets out of accord with the actual productivity of the capital good. Especially is this true with specific use goods, and with others during times of rapid change such as experienced under varying degrees of general prosperity or changing price levels. Farms and factories that were rented under long-term leases in the late twenties became a real problem in the depression that followed. It is necessary, of course, for someone to absorb the loss due to a great shrinkage in earning power of a capital good. It may be argued, too, that the farmers and manufacturers in this case are requited when earning power advances and, in the long run, the whole thing breaks even. Practically, however, it is better that the terms of rent should reflect as nearly as possible the actual productivity of the good. The calculations made by the entrepreneur on his business prospect should not be made over-speculative by uncertain elements of this nature associated with rented capital goods. In general, true rent rather than other income, should come to the wealth owner as his return to property. Goods of specific use, therefore, whose prospect of earning necessarily varies with the changing market condition of the product, should be rented under short lease or, better, have provision in the contract for readjustment of rent price from time to time in accordance with some index of change. Goods of more general use, though normally less subject to sudden change in value

productivity, are almost as susceptible to slump or increase at times of general economic change or political upheaval. At such times, contract rents might well be susceptible to review and those that were seriously out of line given remedy. A liberal application of this idea would make rents more like corporate dividends. Such a policy, of course, only shifts the burden of speculation as associated with one portion of capital goods—it does not eliminate it.

Social Loss through Rigidities.—The deeper social problem of unequal change in the productivity of different capital goods in a fast-changing economic order deserves statement. Finance capital newly invested in all forms of capital goods tends to be equally productive, but old investments may diverge from that condition through obsolescence of some forms and increasing usefulness of others. The tendency, in fact, is for rents of different goods always to be drawing apart but through the compensating action of newly distributed investment they are drawn together again. For capital goods that lend themselves to small increments and decrements this compensatory functioning is practically complete and all are maintained in equilibrium at their margins. For those that do not, the corrective is crude and tardy. Economic rigidities that are socially very costly thus develop especially in connection with long-lived, specific-use goods and we have our problems of over-invested industries such as railways and wheat growing. The problem, it should be noted, is more visible to us in connection with over-investment and inability to withdraw. It exists, however, also in relation to under-investment and inability of some capital goods to receive small increments.

Correction of contract rents to bring them into line with productivity would not remedy this problem though it would redistribute in some degree the incidence of the loss.

Depreciation and Appreciation.—Rent being based on the productivity or utility value of particular goods, must include obviously the depreciation or appreciation of the good. In fact with many goods rent is nothing more nor less than the measure of the depreciation during the period under consideration. A man building a house really produces a good that embodies a certain quantum of utilities which by reason of its nature must be distributed over a number of years. Each year thereafter the house yields up a fraction of the total amount and thereby depreciates to that extent. That yield, if the rent is properly calculated, is also the measure of the rent. When, after many years, the house is worn out, or is no

longer marketable on account of complete obsolescence, depreciation has covered the sum of all rent payments.

But with some forms of wealth there is appreciation as well as depreciation or, better expressed for our purpose, there is *on balance* between the two a gain or a loss in the good or perhaps no change at all. In other words, utilities develop in such goods as time passes in addition to those already created and embodied at the time of agreement. A factory building, for example, may command a rent of \$5,000 a year, including site, immediately after erection but ten years later may be renting for twice that sum. Its capitalized value at the beginning if rightly calculated would need to have included these gains but the chances are it did not. Appreciation for the most part is social in derivation having its origin in the progress of civilization whereas depreciation has its reason in physical as well as social causes. Appreciation is widespread in an advancing society affecting probably the majority of durable wealth forms though not to the point always of cancelling depreciation on the balance. The point is significant, however, that it is operative even where exceeded by depreciation inasmuch as it is likely to be insufficiently allowed for in calculations made in advance. Similarly, depreciation that has its origin in social causes is liable to have received scanty advance attention and will also lead to errors of judgment with respect to the future of long lived goods.

Land Rent as an "Unearned Increment."—Much attention has been directed by some students to appreciation in land values and the social origins of land rent. Defining land as the original and natural aspects of the soil exclusively, and deducting from the total productivity of a given acreage or building site the part due to human improvements, they have emphasized the point that the rent of land has been caused entirely by the expansion of society regardless of the intention or plan of its owner or without any effort on his part. They have seen fit to allude to it, therefore, as an "unearned increment" in the totality of income in contrast with that resulting from labour and other capital forms. While its rise is thus altogether natural and incidental to the general advance of society, its distribution has taken place under a man-made institution, viz-private property in land, with little awareness of the social consequences. Rent may or may not be an object of individual appropriation and private contract according as society chooses. This school of thinkers is of the opinion that it should not. Under our system it is included within the scope of private property and we

have the phenomenon of contract rent as well as free buying and selling of land in full ownership. Along with the improvements on it, land is a legitimate object of private enterprise and its exploitation is carried on according to the arrangements of our regular pricing system. These thoughtful critics have challenged the wisdom of this arrangement contending that it results in the development of a class in society who draw from the national income an assured part without performing any service, and furthermore that productive efficiency would be enhanced if appreciation in land values did not go to individual owners, and if land rents were no longer an object of business traffic. Men would no longer buy land simply to hold it for the rise. They would have to gain from it entirely through putting it to productive use.

In our treatment we have not seen fit to distinguish "bare" land from other capital goods as in a class apart. In the present matter we have pointed out that appreciation is widespread in a developing society and unearned increment is not confined to natural land nor even to all capital goods. We have also intimated that depreciation due to social causes is ever prevalent and, we may add here, affects land as well as other capital forms. Investments in it sink as well as rise. Land, because of its unparalleled permanence, and scarcity, should be accorded special consideration, but the difference between it and other durable forms is relative when one views the whole matter in the light of present conditions.

CHAPTER XXI

INTEREST

THE Nature of Interest.—We are all acquainted with the simple type of transaction where a man borrows money from another man or a bank, and contracts to pay it back after a period with interest. If the amount borrowed is \$100 and the period of the loan is one year, the contract will call perhaps for the payment of \$100 + \$7 at the end of the year. The \$100 we speak of as the principal, the \$7 we call interest. It is quite evident that the \$7 is the price that the man pays for the use of the \$100 for the year. Interest is the price paid for the use of money. The picture that we carry of our economic society, viewed from this angle, is one of men and institutions ranged on two sides of the capital market, some as borrowers, others as lenders, trading in this unique commodity, money. The lenders sell the use of it, the buyers purchase the use of it. Some people need more money than they possess of their own and consequently they seek to borrow. Demand thus arises from the activities of manufacturers, merchants, farmers, speculators, building contractors, as well as from the desires of consumers who wish to purchase homes or automobiles, or pay hospital bills. Other people have more money than they care to spend at present. They prefer to *save* it in order that they may have more in the future. They develop deposits in banks, invest in annuities, buy bonds or stocks, or lend it directly to individuals of their acquaintance, taking security perhaps in mortgages on property. Supply develops through the activities of savers, and savers are found in all ranks of the population, but especially among the well-to-do.

On either side of the market, therefore, there are traders with varied attitudes as to how much they will take or offer at different prices (rates of interest). We may visualize schedules of demand and supply with marginal borrowing and marginal lending. Where the curves meet is the current interest rate—the price of the use of money.

This picture is true enough but it does not carry much meaning unless we appreciate the role that money plays in this connection

in organizing economic activities. For money here as seen by the borrowers is finance capital, i.e. means through which they may come into immediate control of desired goods or resources. If they are consumer borrowers, it enables them to enjoy certain satisfactions which they are much concerned about at once. If they are producer borrowers, it involves not only immediacy—command over resources in advance of product—but it determines whether or not they shall command them at all. Without it, and its liquid attributes, no organization of control over varied resources comparable to that we see today would exist. While on the supply side of the market the savers think of themselves simply as saving money for a price, or at most, of forgoing temporarily the privilege of spending it on consumption goods, and on the demand side each sees the market as a means of increasing his pleasures or his gains, the social result of finance capital thus recruited and organized is, through consumer borrowing to shift and presumably increase consumer utilities, and through entrepreneurial borrowing to bring about a vastly increased as well as a changed production. For the typical saver rarely practises much active control over productive resources whereas the borrowing firm just as typically does so. In fact this transfer of control from savers to borrowers, via whatever middlemen may be involved, means turning over to specialized minds the choice of what resources shall be used and the direction of how they shall be used, but of course always in view of consumers' desires. (To the degree that consumers also borrow there is a transfer, too, in the final selection of what shall be consumed.) The transfer to entrepreneurial borrowers furthermore results in the total in a great centralization of control over resources. The organization of the market for finance capital is thus a larger matter than mere money savings. Organized intelligence in the direction of exploitation of resources and selection of the durable forms that shall embody the social savings is quite as important as mere thrift. Inability to see anything to save for, rather than lack of the virtue of thrift, is probably the reason primitive peoples fail to save. Weaknesses in the functioning of this market soon show their ill effects upon our whole economy.

We wish to remark at this point that the equilibrium analysis in terms of demand and supply as presented in the following pages holds true only in the long run. It assumes, after the manner of the classical doctrines, that whatever is saved is spent (or invested) by somebody else. Scholars and investigators since World War I,

with the English economist J. M. Keynes leading, have shown that this is usually not true of the short run. While net investment (i.e., gross investment less replacement of capital goods and durable consumers' goods) must eventually equal saving, during boom periods it is greater than saving and during depression periods it is less. In the full round of events covering the business cycle changes, including in sequence periods of heavy lending, slackening, unemployment, falling social income, lessened saving, etc., long-run equalization is accomplished. This analysis of the demand and supply of finance capital as it stands at any particular moment must needs be left for treatment incidental to the study of the business cycle.¹ With this digression we return to the main current of thought.

Demand Analysis.—Little further needs to be said regarding producers' demand. Entrepreneurs approach the market when they feel that by so doing they can increase the productivity of their business beyond the cost of the use of the money. Whether the method is through issuing bonds for sale to the public or borrowing on direct note from the bank or private individual matters not for our purposes. Money is a commodity ideally homogeneous and divisible and each entrepreneur may have a scale of amounts he will take according to the descending scale of interest rates. Each man, therefore, will have a definite amount he will take at the interest rate of the moment and the contacts of the market will bring all their bids into equilibrium at this their common marginal productivity rate.²

The whole demand schedule includes, however, consumers' demands as well. Those who furnish the demand for consumers'

¹See *infra*, chap. XXVI.

²Economists in the past have stressed unduly the association of interest with investment in capital goods. This is erroneous. Entrepreneurial finance capital used in the payment of wages in advance of product is of the essence of its use as well as that expended on raw material or equipment. The gain through its use out of which demand for it arises has its cause in the co-ordinated activity of the firm. Nevertheless it is true that larger and more continued use of finance capital associates with industry where large use of long lived capital goods pertains. The more roundabout the method of production, the greater comparative expenditure on plant and machinery, the longer the time is likely to be between first expenditures and returns from sales, and consequently the greater the "overhead" which means largely interest. The reasoning is essentially the same as that in the next paragraphs which distinguishes durable from other consumers' goods as an object of borrowing. It is the necessary emphasis upon the time element.

finance capital are classified into two groups. First, there are those who wish to spend the funds for immediate satisfaction. They are consuming what they have not yet earned. Barring gifts and theft, this is only possible through the system of credit or borrowing. The reasons for this trespassing upon the future are various, ranging all the way from conditions of dire necessity to those associated with the unpardonable activities of the spendthrift. It may be a matter of a hospital operation being necessary to save the life of some member of one's family when the earning power of one's future must be mortgaged in order to borrow \$500 today. It may be a matter of a government borrowing a hundred million dollars by means of a bond issue to keep its unemployed citizens fed and housed. It may be the case of a salaried man borrowing to indulge himself in an extended vacation trip. Perhaps the most widespread example of this type is that of working people buying on credit at the grocery when they know that by paying cash they could get cheaper prices. While they do not actively borrow money, they refrain from paying money to the merchant who must perforce include an interest charge in his prices.

Borrowing of this type may be ascribed partly to the trait apparently written deep in the constitution of most of us, viz. that we prize the use of goods today more highly than we do the use of the same (or like) goods a year hence. This is frequently spoken of as *time preference*. We are creatures of foresight it is true, but our foresight is not 100 per cent effective. Like the child that would sooner have the ice-cream cone today than postpone the enjoyment until tomorrow, even though it has every reason to expect it will be just as hungry tomorrow, so are we all (or nearly all) with respect to most of the pleasurable things of life. It may not be rational but it is part and parcel of our make-up and may be verified by anyone from his own experience or from observation.

But we may go a step farther. Not only does our desire for a particular commodity in the present rise superior to the claims of the same commodity at some future time but it exceeds our desire for all other goods and services of anticipated equal utility to us at any subsequent date. The result is that we borrow the money to get it even though we know we are depriving ourselves of a greater quantum of enjoyment from all kinds of goods in the future as measured by money. In other words, there is a time preference for finance capital itself inasmuch as it constitutes purchasing power over consumers' goods generally which themselves are sub-

jects of time preference. The two allied phenomena may be distinguished by calling the one *specific* and the other *general* time preference. The latter we shall meet with again on the other side of the market.³

Thus far we have stated the case as if this line of action were irrational, a frailty of our nature, an insufficient appreciation of the future. We are all tarred with the same feather as the child who is governed by a present appetite. The matter, however, is not quite so dark. The situation in some cases is necessitous. Or we may figure quite rationally life is uncertain. Enjoyments postponed may never be realized. Perhaps we may reason that, though living, we shall not have the same capacity for enjoyment in the future. Or possibly the force of circumstances may cause some line of expenditure to be particularly desirable just now. A new sports model may seem almost a necessity to maintain one's prestige when associating with a particular group, against which next year's skimping can be forecasted as comparatively painless in another social setting. Demand for finance capital arises, therefore, both on a rational and irrational basis in connection with consumers' goods.

Contrasting with this type of borrowing, though still a loan for consumption purposes, is that where the borrower seeks funds to purchase some *durable consumer's good*, such, for example, as a dwelling house, an automobile, a piano, or a fur coat. The essential difference between this type of borrowing and the first is that here something durable results capable of giving off its utilities in the future. Consumption, in other words, is delayed, as well as payment.

It is much to the point to remark that borrowing and lending relations are much more frequent and pervasive where this type of commodity is involved. Apart altogether from approaches to third parties for loans, trafficking in finance capital by producers and users themselves seems well-nigh universal in the marketing and consumption of such goods. By their very nature time is involved in the yielding up of their utilities, and control over the source is a natural object for purchase and sale. The yield of utilities by a specific good is, as we have seen, the subject of rent. Nevertheless, there is provision of finance capital in advance of that yield which

³It will be observed, however, that even the general time preference is usually specific with respect to the present objective, i.e. the borrower has some particular purpose for the funds in the present. He compares this enjoyment, however, against no specific use in the future.

is a subject of interest. Paying for such commodities outright, furthermore, does not mean that there is no trafficking in *waiting*. In such case the buyer of the commodity is paying for most of the utilities in it long before he can enjoy them and the seller is not having to wait until they mature. This fact is well recognized in the cash price of a house (say) as contrasted with the value of its currently maturing utilities as expressed in its rental. Whereas the sum of all its monthly rents during its life-time may add up to \$10,000 its cash value will be (perhaps) \$6,000. The seller of the house, in other words, allows the buyer \$4,000 for placing at his disposal \$6,000 control over general resources now. Examination of the various arrangements for exchanging such commodities reveals a great variety of devices for distributing the burden of waiting. Sometimes the buyer and seller each carry part. Very frequently some third party—bank, loan association, automobile finance corporation, or what not—assumes it through being approached by either the buyer or seller as borrower.

Government borrowing has become a very important part of total loans since World War I. Some of this is devoted to production and maintenance of durable forms. In some instances the period contemplated by the utility yield is too long for individuals and even corporations to undertake. Much government borrowing, however, is for war and spendthrift purposes. The vast sums being spent today on relief leave us with no wealth increase.

The Demand Schedule for Finance Capital.—The demand for capital is composite in origin. Applicants for consumers' loans vie with applicants for production loans and together they condition the market and influence the interest rate. The causes of consumers' demand being as it is are legion. Any event affecting the rate of time preference in consumers' minds, such as assurance in time of depression that salaried people will be on better pay in the near future, will speed up the demand for funds to buy automobiles, household furniture, college education, vacation trips, and other forms of consumers' goods and services. Generally speaking, this strand of demand is rather elastic except where it is associated with necessitous circumstances or involves short periods or very small amounts. Entrepreneurial demand depends upon anticipations concerning net value productivity of industry. Naturally it varies in quantity and in elasticity with the conditions of business. The uncertainties that go with threats of war retard it except for government borrowings and those industries associated with war prepara-

tion. But borrowing on government account for both production and consumption purposes has become a dominant feature in the finance capital market, particularly for long-term loans since 1930.

Analysis of Supply: (1) The Commercial Banking System.—Supply of finance capital comes from two sources, viz. from savings and from commercial banks. The banking system, we shall learn in Chapter xxiv, is an organizer and often an enlarger of finance capital. Operating on a base of money derived from share sales and from savings of individuals received on deposit, it extends its credit as working capital to merchants, manufacturers, and other entrepreneurs in an amount far in excess of money paid in. True, it receives from these merchants and manufacturers claims on obligations running among them before it provides them with this working capital in the form of chequing rights.⁴ But the point is that through this exchange these entrepreneurs are provided with *liquid* credit, i.e. finance capital through which they may control resources necessary to new production which otherwise they must needs wait for until buyers of their products have paid for them. The banking system, therefore, is a party to the creation of finance capital. Furthermore, it affects demand in that it enables firms to plan their near future with a smaller provision of funds in their possession as related to the size of their productive operations than they would otherwise dare to do.

(2) **Savings.**—What is saving? In essence it is the postponement of consumption. Instead of consuming all we have as soon as it is produced we put something by for future use. Eventually this portion saved may take the form either of capital goods or durable consumers' goods. This, however, is the complete social result.⁵ In our specialized economy this usually involves the co-operation of several persons and firms including financial organiza-

⁴Explanation of this will be given in chap. xxiv.

⁵Professor S. H. Slichter in *Modern Economic Society* (New York, 1931), p. 662, basing his calculation upon the estimates of Dr. W. I. King's statistical study of the volume of saving in the United States comes to the conclusion that the annual savings of that nation are on an average somewhat more than 7 per cent of the national income. Otherwise expressed the national wealth increased by approximately one-quarter in a period of ten years (1910-19). This affords us some idea of the rate of accumulation in modern society. A computation including the years 1929-32 would, however, doubtless reveal a greatly reduced percentage of saving. One way of making such a computation, it is interesting to note, is to compare the national wealth of a country as given in two successive census reports. This, however, is measurement through the completed social result. The amount of wealth increase is taken as the savings for the period.

tions. For our purposes here saving has a narrower meaning. It is nothing more than the postponement of consumption and the storage of value in money. What the individual saver really does (let us suppose he is a farmer) is to produce goods—wheat, livestock, dairy products—in value greater than the other goods—clothing, housing, food, amusements—that he and his family have been consuming. Through his effort there is a balance left in actual wealth in the community. He might have consumed goods of as great value as he produced but he refrained. He chose to wait, storing his claims to the value meanwhile in money and later selling its use to a bank. Today he has money at the bank to the extent that he has saved. What he actually has is a claim upon the general stock of saved goods of the community in amount equal to the value of those he refrained from consuming. Money is a device for shifting and storing claims upon savings. It stimulates and facilitates savings. In the possession of a bank we have seen it enables the bank to extend credit to enterprising borrowers who thereby are enabled to possess finance capital. But saving money is not of itself the completion of saving.

There are two sources of savings, viz. individuals and business firms. Individual saving (apart from inflation and government compulsion) takes place through an act of the person's own judgment. It is a matter of his evaluation of his enjoyment of consumption in the future as compared with the present. The methods of how he accomplishes saving we have already considered.

Factors Affecting the Rate of Individual Saving.—The circumstances determining the rate of individual saving are as follows:

(1) *The amount of per capita income.* Low-income receivers are compelled to spend practically all of their earnings for necessities.

(2) *Steadiness of income.* Fluctuating incomes do not develop habits of thrift.

(3) *Source of income.* People who acquire income through arduous effort are inclined to save more than those who reap windfall gains.

(4) *Inequality of incomes.* In the United States during 1935-6, individuals with incomes up to \$1,250 per year saved nothing, whereas those with incomes above \$5,000 (less than 3 per cent of the population) provided 79 per cent of total personal savings.⁶

⁶National Resources Committee, *Consumer Expenditures in the United States*, (Washington, 1939), p. 48.; Temporary National Economic Committee, *Monograph no. 37*, pp. 16-18.

(5) *Length of life and period of dependency.* Other things being equal, the longer one expects to live the greater one's tendency to save.

(6) *Rate of impatience.* Apart from the above considerations there is probably what may be called a native rate of impatience among peoples. Given the same average income, degree of inequality, and average longevity, different peoples vary in their concern for their economic condition in the future. Striking differences in the matter are observable also between families and even among members of the same family.

(7) *Institutional influencing.* The fundamental institutions of property and inheritance encourage saving especially when they are protected by a stable government. The government may influence saving directly by compulsory contributions to social insurance. The existence of banks, insurance companies, and security exchanges also play a part.

(8) *Forms of durable goods.* The amount of saving varies directly with the importance which people attach to possession of durable goods. Among primitive peoples this was a negligible factor. By contrast advanced societies attach great significance to possessing houses, automobiles, and such lasting types of wealth.

The Nature of Business Saving.—Business saving takes place through the reinvestment of profits. Instead of paying all the profits of the year to the owners in the form of dividends, a part or possibly all of these are kept in the business. Expressed in accounting terms they are "carried to surplus" or "added to proprietorship." Actually, they are used to buy more machinery, increase the raw material, develop the market, or increase the plant, or in order to maintain the liquid position of the firm they are used to buy securities or held as cash. Across a period of years, 1909-16, the W. I. King estimates show that business savings and individual savings amounted to about the same in the United States, although they varied by single years. Business savings showed the greater degree of fluctuation, running to more than four times the value in 1916 that they showed in 1914 even where corrections were made for the change in price level. In 1917 business savings amounted to 71 per cent of the total savings.⁷ It has been estimated that during the period 1930-9, fifty-eight large industrial

⁷L. D. Edie, *Economics: Principles and Problems* (New York, 1926), p. 282.

corporations invested over \$5 billion in plant and equipment. Of this, 90 per cent came from their own savings.⁸

Factors Affecting the Rate of Business Saving.—The chief influences upon the rate of business saving are:

(1) *The amount of industrial and commercial profit obtained in the immediate past.* If there has been little profit, there is little that can be saved. It probably depends too upon the regularity of profit over a period as well as its absolute amount.

(2) *The expectation of future profits.* The directors of industry are guided to a great extent by their views regarding the future course of business. If in an optimistic mood, they will "plough back" a greater percentage of net gains than under circumstances where prospects are not so bright.

(3) *The continuance of well-established firms as contrasted with the organization of new ones.* Business savings are associated with old, well-established firms which have developed a good reputation and are desirous of maintaining it. A sound business policy which enables the concern to expand over a period of time while avoiding the necessity of financial reorganization during economic depressions is conducive to saving.

(4) *Government tax policy.* The taxation policy of the government has a direct bearing upon the amount of business saving. Taxes levied on personal incomes stimulate receivers of large incomes to leave their profits in the business. Taxes directed against surplus account operate in the other direction. Excessively high individual income taxes, however, might have an indirect tendency to lower business saving by discouraging individual initiative. If the individual feels that it is not worth while undertaking the risks of business because the government demands such a large share of his net income, he may curtail his industrial activity and business will have less income out of which to save.

It should be noted that business saving, though treated by itself, is not wholly distinct from individual saving. A disposal of profits that turns a relatively small part back into business thereby releases a larger proportion to individuals. This, of course, will affect individual saving, but how much of the excess that is so released will be saved will depend upon all the circumstances affecting the individual mind.

⁸*American Economic Review*, supplement, Papers Relating to the Temporary National Economic Committee, June, 1942, p. 78.

In so far as interest is the price paid for the use of finance capital, its rate can be explained on the basis of the familiar demand and supply analysis. We have examined the forces behind the demand and those accounting for the supply of finance capital.⁹ Our next step is to find out how the interaction of demand and supply results in a particular rate of interest.

Demand and Supply and the Interest Rate.—We have come at last to the point of bringing together our two schedules and examining their interaction to witness the determination of the interest rate. We have found that the commodity traded in is finance capital. Those who provide it postpone consumption; they sell temporary control over goods. Those who take it acquire control of labour services and of utilities that are locked up in durable goods, whether producers' or consumers' goods.

Let us then visualize this market. On the supply side savers offer their wares. In view of the various potential interest rates they offer different amounts of savings at these different rates. A 6 per cent interest rate will call forth more than a 4 per cent rate. Savers that would have marginal offerings at the latter rate would not offer at all at 2 per cent. Savers that would offer at 2 per cent are enjoying a lenders' surplus on part of their offering if we consider the market rate to be 4 per cent. There has been much speculation among economists regarding the shape of the supply curve. It has been noted that some people would save with interest at zero or even if they were to get less than their full principal back. Furthermore, it is doubtless true that some would save less for a 6 per cent rate than a 4 per cent rate. We have noted that the amount of business saving is intimately associated with conditions of production which at times are rather compelling, at *others*, less so; and that individual savings are influenced by a number of independent factors which in total make for considerable inelasticity of supply from this source also. The consensus of opinion is, however, that, apart perhaps from extremely high rates, more savings will be offered in the total as higher and higher rates are considered. Altogether the curve conforms to the regular supply curve type sloping upward and to the right. Probably it is somewhat inelastic especially in the lower reaches.

On the demand side consumption borrowers compete with borrowers for production uses. Other things being equal at any point

⁹For a different approach to demand, supply and interest rates see below, pp. 363-64.

of time more borrowing would take place at low interest rates than at high. The curve slopes downward to the right. For consumers' borrowing this would be explained by the effect of diminishing utility; for producers' borrowing it would be owing to the action of diminishing productivity. Generally speaking, the demand for loans is probably more elastic than the supply but there is a great difference between different times as to how elastic it is. With the psychology of high profits in industry in full possession of industrial leaders, the business demand may be quite inelastic, as it may become again for other reasons at lower rates when a depression is well under way. Likewise when the nation is at war the insistent demand on government account tends to make the whole demand rather inelastic.

On the demand side, furthermore, there will be marginal and intra-marginal increments in the borrowing at any rate of interest we may consider. Among loans for productive purposes the marginal elements will be those where the gain or premium through the use is just equal to what the borrowers pay for the funds. The intra-marginal elements are those where the gain exceeds the price paid. Among loans on consumption account, the marginal are those increments where the advance enjoyment of utilities just equals the interest paid. The intra-marginal increments show a consumers' surplus. The interest rate is determined by the interaction of the two schedules at the point of intersection of the curves.

Not All Waiting is Bought and Sold.—It may have occurred to the reader that much of the social saving that is done never passes through a market. The farmer may grow his own wheat. The tinker may produce his own furniture. The electrician may wire his own house. Here are utilities stored in durable goods and loaned to nobody. The producer will consume them himself as the years pass, and along with them he will benefit from the waiting which he likewise has provided. The major part of business saving, moreover, is never marketed. If the loan market, therefore, reflects only a part of the handling of the stored utilities of society, it may well be asked what reason is there for saying that it measures the true price of waiting? Is there not a true economic interest that reflects the *total* supply and consumption of waiting apart from this interest on money? The answer is "No." Under conditions of free competition the money loan rate reflects the true price of waiting just as surely as the market price of eggs is their true price, even though a large part of the total of eggs produced are eaten at home and never go to market.

The Keynesian Approach to Interest Rate Determination.—In recent years the views of the late Lord Keynes regarding interest have received a great deal of attention.¹⁰ The gist of his doctrine is that the interest rate is determined by the demand for money as reflected in *liquidity preference* and the supply of money as governed by the banking system.

The term "*liquidity preference*" refers to the attitude of individuals in which they desire to possess money rather than other assets of a less liquid form. This is a demand to *hold* money. Liquidity preference governs the demand side of the market for purchasing power. This demand varies considerably during the course of changing business conditions. When people believe that prices are going to go down, they will attempt to convert their holdings of goods and securities into money. Under such circumstances the demand for money, liquidity preference, tends to increase. On the other hand, if the prevailing view is that prices are going to rise, there will be a rush to buy goods and securities. Here people do not want to hold so much money as formerly, i.e. liquidity preference, hence the demand for money, declines. Thus liquidity preference governs the demand for money. According to this view, interest is not a reward for saving but for the sacrifice involved in giving up liquidity.

The supply of money on the other hand is controlled by the banking system. As we shall see in a later chapter,¹¹ it is possible for the banking system to increase or decrease the volume of purchasing power in the hands of the public. The lending operations of the banks, whether these consist of direct advances or security purchases, result in enhanced bank deposits (spendable funds, i.e. money in the broad sense). Conversely, the retirement of loans and selling of securities by the banks reduces the volume of deposits. Hence the banking system can vary the quantity of buying power as expressed by deposits in a given country. In other words, it controls the supply of money. As a result of this influence over the supply side of the market, the banking system can control the interest rate by varying the amount of money in the hands of the public.

Adherents of the Keynesian school point to the success of the low interest rate policy during World War II as evidence in support of their contention that the banking system can control interest

¹⁰J. M. Keynes, *General Theory of Employment, Interest and Money*.

¹¹See below chap. xxiv.

rates. It has been argued that enough purchasing power can be created to satisfy the prevalent demand to hold money. The liquidity preference schedule has the same general characteristics as the demand for consumers' goods, or for any factor of production, e.g. labour. This schedule can be represented by a curve which slopes downward from left to right. In other words, people would hold a small amount of money at a high interest rate and a larger quantity at a low rate.

At any given liquidity preference schedule the banking system could vary the supply of money and thus control the interest rate. For example, the banks could increase the volume of money (issue additional notes or create new deposits) by purchasing bonds. This would have a tendency to increase the price of securities and thereby decrease interest rates. The interest rate yielded by any asset bearing a fixed return varies inversely with the price of the asset. For instance, a \$100 perpetual bond sold at par and paying \$4.00 per year yields 4 per cent. If the price of the bond were raised subsequently to \$200, the yield would be 2 per cent (\$4.00 on \$200). Similarly a fall in price of the bond would increase the rate of interest yielded. The reverse operation on the part of the banks, i.e. selling bonds and cancelling deposits, would reduce the money supply, decrease the price of securities, and raise the interest rate. Other things remaining the same, a variation in the demand for money would result in a different interest rate. That is to say, if the desire of the public to hold money increased, the rate would rise and *vice versa*. But in so far as the banking system has unlimited power to vary the volume of purchasing power, it could neutralize any change, either up or down, in liquidity preference. In the last analysis, therefore, control of the interest rate rests with the banking authorities.

Evaluation of the Liquidity Preference—Money Supply View of Interest.—Liquidity preference and the supply of money doubtless help to determine the rate of interest at any particular time. But this is a short-run phenomenon. The individual (or firm) possessing money does have the opportunity of deciding whether he will keep this purchasing power idle or exchange it for some asset, preferably one which would yield a return. The more intense the public's desire to hold money, the higher the interest rate would tend to be and *vice versa*. The supply of money as controlled by the banking system also has its short-run influence. The rate of interest would tend to vary inversely with the volume

of bank credit outstanding. This is generally accepted economic theory and broadly speaking is supported by statistical evidence.

But there are certain difficulties with the liquidity preference approach. In the first place liquidity preference appears on both sides of the market for monetary funds. As we have seen, it contributes at least part of the demand for purchasing power, stemming from the desire to *hold it idle*. At the same time liquidity preference is a factor determining the supply of purchasing power because a rate of interest higher than an individual's liquidity preference would cause him to lend money. Conversely, a rate of interest lower than his liquidity preference would result in a withdrawal of funds from the loan market. It is difficult to see how an element which enters into both demand *and* supply can be used as a basic determinant of the equilibrium interest rate from the demand side only.

In the second place, even in the short run the degree of liquidity preference and the interest rate do not necessarily move in the same direction. It has been pointed out that during an economic depression when people want to hold money, i.e. when liquidity preference is high, interest rates are very low, and in a boom when the public is optimistic and prefers goods and securities to money, interest rates are high.¹² True, the banking system may take steps to increase the monetary supply in a depression and thus tend to force interest rates down, but the quantity of money is usually much greater in a boom than in a depression. In brief, during a period of intense business activity, the relatively large quantity of money and small liquidity preference do not result in low interest rates. Anyhow from a historical viewpoint, before central banking authorities deliberately attempted to affect interest rates by varying the money supply, a similar phenomenon prevailed. During certain phases of business activity, interest rates and liquidity preference moved in opposite directions. Actually interest rates are low in a business depression on account of lack of opportunity for profitable investment. The demand for money to invest, not to hold, is lacking. Conversely, in a business boom, the demand for money to invest is strong resulting in high interest rates, even if liquidity preference is very weak.

The liquidity preference-money supply analysis is certainly defective as an explanation of long-run interest rates. It fails to

¹²F. H. Knight, "The Business Cycle, Interest and Money: A Methodological Approach," (*Review of Economic Statistics*, vol. XXIII, 1941).

take into consideration the fact that, over time, the demand for money is a demand for the resources money will buy. Chief among these resources is capital in the form of goods. Over a period of years, capital goods come into existence, not by means of additions to the money supply, but as a result of labour and *saving*. (The one exception is unimproved natural resources which do not depend for their existence on money, labour, or saving.) It is as a reward for saving (i.e. postponing consumption or "waiting") that interest has to be paid. While in the short run, as we shall see, an increase in the supply of money may stimulate capital formation, in the long run it has a different result. The ultimate effect of an increase in money is a rise in the general price level. This price increase is independent of the interest rate. Otherwise, how explain the rise in prices and comparative stability (there was a slight fall) in interest rates during World War II? Despite the rapid increase in prices and money supply throughout the course of World War I, interest rates actually went up. In other words, between 1914 and 1918 (actually till 1921) the increase in supply of purchasing power was accompanied, not by a fall in interest rates, but by a movement in the opposite direction. The increased money supply was reflected over time in higher prices, not in lower interest rates. The recent (early 1948) slight increase in interest rates can scarcely be attributed to a decline in the quantity of money, or, in view of the current volume of spending, to an increase in liquidity preference.

To summarize: The liquidity preference-money supply interest rate analysis is useful as an explanation of some of the forces operating in the short run. But it leads to difficulties in so far as liquidity preference affects both sides of the market, i.e. both demand and supply. Furthermore, it fails to show why under certain business conditions interest rates are low when liquidity preference is high and *vice versa*. As a long-run explanation the analysis is defective because it does not take into consideration the fact that the ultimate demand for money is not to keep purchasing power idle, but to use it for the purpose of getting control of economic resources, chiefly capital goods. These capital goods are not created by mere additions to the money supply but through human effort, labour, and *saving*. Interest is a reward for saving. Hence in the long run, the rate of interest is determined by the demand for and supply of finance capital because of the command over productive resources which finance capital entails.

Saving an Unbroken Process.—Our attention to the interest rate and the changing possession of capital and durable goods through the medium of the loan market may mislead us into thinking of this aspect of the economic process as a disjointed series of activities, first, of building up through saving by one set of persons and then of using them up by another set—the borrowers—and this dual process with its complementary opposites continuing *ad infinitum*. But this is not the true picture. Accumulation is a continuous process and although borrowers and lenders line up as distinguishable opposites in the money market they are not so distinct as regards the whole process. The same persons are savers and consumers at the same moment, and business firms, even while they are applicants for the savings of others, are shaping human energies and capital goods into other goods of greater value. They also are savers, therefore, in a very large way. Accumulation should be thought of as the resultant of the continuous interaction of production and consumption. The active principle making for increase is expressed through the use of more and longer-lived capital goods. The principle making for enjoyment and decrease is expressed through the use of short-lived consumers' goods.

Changes in the Interest Rate.—Practical considerations require that we explain not only the causes of the interest rate but what are the causes of changes in the rate. Like all other prices these can come about only through changes in either the demand or supply schedule. The interest rate increases as total demand increases and falls as supply increases.

Of the two strands of demand, business demand and consumers' demand, the former is the more fluctuating. Business demand hinges chiefly upon anticipation of business profits. Demand for capital equipment, raw material, and plant, increases greatly during the period of ascending prices and profits in the modern business cycle. Chiefly on account of increased demand from this source, interest rates mount at the same time. Demand for all these items, especially demand for fixed capital, falls suddenly with the turn in prices as anticipations of profits disappear, and runs at a low level during the period of depression. Interest rates are consequently low. Apart from considerations of the business cycle, there are, especially in high latitude countries, rather definite seasonal fluctuations in business demand. Seasonal fluctuations, except in the construction industry, have their origin largely in short-term borrowing for working capital. Agricultural demand especially runs

strong in the spring and early summer, dropping low in the autumn. Lumbering, on the contrary, increases in early winter. Probably business demand as a total is highest in Canada in late spring and lowest in November and February. Much of this fluctuation is neutralized, however, in the total demand through the compensating influence of consumers' demand. Historically business demand has shown great falling off in the period of the seventies and nineties of last century and in the two serious depressions of the period after World War I, in accordance with the low margins of profits prevailing. It quickened in the periods 1900-13 and 1922-28 and especially during and immediately following the war. Interest rates have in rough measure reflected these differences although government borrowing activities and banking policies have operated to cloud the result.

In the second place, both business and consumers' demand (and hence total demand) are stimulated by the various inventions, discoveries, and changes that give rise to new forms of durable goods, development and settlement of new territories, urbanization of population. Such changes mean the obsolescence of old forms and the creation of new. Urbanization means schools, pavements, water systems, houses. Invention recently has meant automobiles, bath tubs, radios, electrical equipment of houses, and a hundred new forms of durable consumption goods. In so far as these new forms enter into the standards of living of the people, they give rise to an ever-increasing demand for waiting and so affect the interest rate. Where that rate would have dropped to in our own day had there been no automobile, we can only conjecture. We should have to make allowance, of course, for the increase in demand for competing commodities such as bicycles, horses and wagons, superior architecture and furniture which doubtless would have resulted had the automobile not absorbed our attention.

Another source of change in demand comes through the changing organization of demand. Notably, this is illustrated in the entry of government as a borrower of first-class importance during the present century. As an entrepreneur in military exploitation government has ever been a variable and incalculable factor in demand. War operations have meant sudden additions to total demand. Peace times have involved variableness through reducing the resulting debts. But, featuring many new ventures today in addition to this, governments are running a close second to private interests in the competition for loans. Government borrowing, of course,

brings in no new principle. Its loans are still either production or consumption loans. It is interesting to note, however, that its assumption of large responsibilities in providing numerous utilities for the consumers in normal times as well as employment and relief in abnormal periods is doing much, along with the servicing of war debts, to affect the total borrowing.

Finally, demand is affected by changes in consumers' purchasing power such as come through unemployment or changes in income flowing from property sources.

Changes in Supply.—At the outset we can lay it down as true that the basis of all saving as well as of all consumption is the productivity of industry. We should expect to find, therefore, that supply of savings would increase rapidly during periods of great productivity and fall off during times of lesser productivity. Otherwise, there would be involved a great change in the proportion between saving and consumption. In the main, our anticipation is borne out in fact. Savings increased during the years of World War I, and during the prosperous years of the twenties. The rate of saving fell off in 1920-1. Moreover, the rate of saving rose much more in proportion and fell much more in proportion than did productivity as a total.¹³

If it were possible to maintain our increasing rate of productivity, there would be reason to expect an even more rapid accumulation in durable goods and in economic welfare. Our difficulty is that business is concerned with profits rather than with productivity as such. When, therefore, profits are no longer forthcoming business leaders shut off productivity and thereby destroy the basis of saving. In this sense, then, changing profit and changing prospect of profitable expansion of industry are the foremost causes of changing saving.

Thirdly, granted productivity is as it is, and that all product is either saved or consumed, it will be evident that changes in the supply of saving will depend upon variations in the proportion between consumption and saving. Once again, we are back with a variable that we were considering some pages back. This is the human rate of impatience which changes from time to time according to the prevalent social values and philosophy of life. It operates in close association with what may be considered a fourth cause of

¹³For trend of savings in the United States, 1900-29, see M. Leven, H. G. Moulton, and C. A. Warburton, *America's Capacity to Consume* (Washington, 1934), chap. ix.

change in the rate of saving, viz. the change in the forms in which consumption utilities are clothed. People are lured into saving through the advent of pleasing durable goods.

The Limits to Change in the Interest Rate.—As a final consideration, having considered the nature of both schedules and the causes of changes taking place in each, let us ask the question, "What are the limits of fluctuation in the interest rate? Or are there any limits?" It has been observed that the rate, while it is ever fluctuating, has fluctuated within rather narrow limits during modern times. True interest runs for the most part between 1 and 5 per cent, although it may fall or advance temporarily slightly beyond these points. Why should it not vary more? Why does it never run to 10 per cent or down to zero? Professor Taussig finds the answer chiefly in the conditions of business demand. The marginal productivity of capital, he argues, has its limits. This is undoubtedly true. Capital's productivity has been limited in its variations in historic times. But why? If we assume a condition of capital scarcity extreme enough, there is no logical reason why its marginal productivity should not be 10 per cent or even 50 per cent. The fact is marginal productivity never exceeds 6 per cent because savings are provided in sufficient quantity to hold it down to that. In the last analysis at any given stage of economic development the limits to the interest rate would seem to be set quite largely by the human rate of impatience. How much do people value present satisfaction above future satisfaction? This seems to be a chief determiner as it operates from both sides of the market. It differs at different times, stimulated by differing forms of durable goods and influenced by changing philosophies, yet never seems to vary beyond these rather narrow limits. A second influence operates, however, especially as affecting the lower range of interest rates, viz. *liquidity preference*, which, as already indicated, means the desire of the saver to keep his funds readily available rather than lend them too cheaply. He would choose to hold them liquid and without return in order to take advantage of better opportunities.

Differing Rates for Different Types of Loans.—We have been speaking as if interest were measured at any point of time by one definite figure. How, then, are we to account for the varying rates exhibited before us? For example, reference to the financial press of June 13, 1939, reveals divergences in listed rates as follows:

Short time:

Call loans.....	4½-5 per cent
Commercial bank rate (Canada).....	5½-6 " "

Long time:

Quotations

Dominion Government. 4 s due 1960 to yield 2.84	110 5/8	bid 111 3/8	asked
City of Halifax..... 5 s " 1961 " " 3.91	116	" 116	"
Republic of Chili..... 6 s " 1961 " "	13 1/8	" 13 1/8	"
C. P. R..... 3 1/2 s " 1951 " "	81	" 84	"
Gatineau..... 5 s " 1949 " "	103	" 106	"

In addition to the above differences, we know that our banks were paying $1\frac{1}{2}$ per cent on savings accounts at the same date, loan and mortgage corporations were paying $2\frac{1}{2}$ per cent, while some borrowers were paying 6 per cent on private loans and others much more. Our banks, moreover, were charging 7 per cent to casual borrowers and 6 per cent to special customers, while insurance companies were loaning at 6 per cent to their policy-holders. What, then, becomes of this concept of a true interest rate that we have been labouring about? The answer is that there is involved in these various rates that we have been naming elements other than interest. Such matters as convenience, service, risk, and other business association between borrower and lender are involved. These quoted rates, in other words, are composite prices of which interest only stands as a nucleus. Call money, for instance, is so different in the part that it plays in our economic society that it really constitutes a separate market. Call loan rates may be high when long-term loan rates are low or *vice versa*. They may be going up when other rates are trending downward. Call loans are those which are terminable at any time upon the demand of either borrower or lender. They are used primarily by speculators in securities, grain, or cotton. Call loan rates vary through a wide range. Individuals, firms, and banks supply this market mostly with those funds in their possession that are momentarily idle but which they may require at any time. At any rate that it will pay they are better off to make such loans than they would be through keeping the money idle. Consequently, the supply is rather inelastic. At times when demand is weak, therefore, the rate runs very low. Demand, likewise, is liable to be very inelastic. Speculators who wish to "get in" on a rising market in stocks do not hesitate to pay high rates for money for a few days or hours. But the outstanding characteristic of demand here is its variableness. It is evident that considerations of variableness, convenience, and inelasticity account for the wide range of rates on call loans.

Long-term loans appeal to a very different class of borrowers and lenders. Such lenders invest with the idea of having a steady income. They have funds that they do not expect to need. They

do not want to be bothered with frequent withdrawals and lendings. Similarly, borrowers on long-term account incorporate the funds in fixed capital or other enduring goods.

Between these two extremes of duration come commercial bank loans (and in the United States commercial paper loans) which funds are directed to circulating capital, service payments, and less enduring consumers' goods. In general, preference for liquidity on the one hand and desire for stable investment on the other, tend to make a considerable distinction between long- and short-term loans, with, frequently, interest rates somewhat unrelated in the two markets. For instance, in 1933 and 1934, a period of great future uncertainty, there were abundant funds on deposit on private account in our banks earning $2\frac{1}{2}$ per cent which were unavailable at 6 per cent to men seeking money on first mortgage security, so highly did depositors value liquidity. Securities that are readily salable through stock-market listing, though long-term, tend to participate in the advantages of short-term loans in this respect.

The differences in the rates on Dominion of Canada bonds, City of Halifax, and Gatineau Power (above) are chiefly due to differences in risk. They may, therefore, be explained in terms of insurance rather than of interest. Part of it, however, is a matter of the narrower demand for the city and power bonds through their merit being less widely known. The low payments by banks to their savings depositors is again a matter of convenience, service, and security to the latter. The higher payment by mortgage and loan companies suggests a larger element of risk. The lower rate charged by insurance companies to their policy holders than is charged by commercial banks is explained in terms of lesser risk and service.

Imperfect Competition.—As one surveys the period after World War I in Canada, one can only conclude that there has been neither automatic interest rate formation on the basis of free competition in all parts of the field nor control of rates, as they touch the people directly, in accordance with principles of considered public policy.¹⁴ What do stand out in the face of great changes in both demand and supply of savings, are (1) uniform and relatively steady rates both offered and charged by our great banks, (2) substantial conformity with these in the mortgage loans and policy loans of the insurance companies, and (3) a great reduction in the rates on the better government bonds. Apart from securities, where the nature of the instrument and the selling organization brings

¹⁴For activities of the Bank of Canada, see *infra*, chap. xxiv.

ultimate buyers and sellers into ready contact, the market for finance capital is dominated by powerful institutions standing in the position of an oligopoly in their dealings with those who borrow from them and in that of an oligopsony in their relations with savings depositors. In neither market has there been any significant price competition among our banks. In both they have moved downward in their rates in unison. Competition has taken the forms chiefly of service, location, and willingness to risk in the particular situation. Meanwhile they have been confronting a demand market for their funds where the demand curve is fairly well sloped and where it has shifted considerably to the left and to the right as depression followed prosperity and then gave way to a better condition. Doubtless concern for marginal cost and marginal revenue equality has dominated the leaders of the various banks but what is more evident is the policy of price stability reaching over long periods in spite of demand changes. In the other market where they confront savers, each has met with a sloping supply curve that was probably rather inelastic, the amount of savings changing relatively little on account of a drop from $2\frac{1}{2}$ to $1\frac{1}{2}$ per cent. The whole supply curve, however, shifted greatly from time to time largely by reason of the changing degree of prosperity, but in some measure also on account of the varying effectiveness of competing offers for savings, notably governments, corporations, and investment trusts with their changing rates on bond issues. Rigidities thus imposed upon an economy and interferences by powerful middlemen with the effective interaction of buyers and sellers, especially when the commodity involved is as vital as finance capital, are likely to cause trouble in a period of change through preventing normal adjustments from taking place. An untrammelled and freely moving interest rate is the normal expression of the social will with respect to the balance between savings and consumption. In large measure it determines society's rate of accumulation which means it regulates economic progress.

The Right Amount of Saving.—The concept of a right amount of saving involves two questions. The one is a matter of the maximum quantum of human satisfaction considered from the long-run viewpoint. The other has to do with the technique of maintenance of production. It is the problem of over-saving as related to over-production and crises.

Concerning the first it may be argued that the individual may go astray in practising too great or too little thrift. Let us say he

rates the future very highly in youth, denying himself most satisfactions beyond the bare necessities. In the course of time he develops the habit of penury and continues the sacrifice. In old age he finds himself wealthy but incapable of enjoying most experiences to anything like the degree he could have earlier. Such cases come before us frequently. They seem to suggest lives lived in disproportion. We cannot judge the optimum satisfaction in such a life, however, without considering the enjoyment experienced in the saving itself. Furthermore, we probably should not judge this matter in terms of the experience of one individual. What he has not consumed he passes on and thereby the quantum of enjoyment in the next generation is affected positively or negatively.

Similarly, we might suggest the possibility of too thrifty or too profligate a *society*. With institutional determination of the proportion of saving to consumption, as was recently carried on in Russia, for example, many would say there was an over-emphasis on saving which was likely to defeat the attainment of the optimum satisfaction over even a relatively long period.

On the other hand, we may postulate that some individuals and some societies save too little. They are spendthrifts; they never get any leverage upon economic attainment through development of sufficient capital. In some cases they may be impelled to thriftlessness through taxes levied by governments and squandered.

Generally speaking, we can only answer this whole question in the same way as we did the allied question in our chapter on consumption where it was suggested that some choices made by consumers were commendable or otherwise according to whether they were judged from their immediate or their long-time results.

The second principle for examining what constitutes the right amount of saving applies to the problem of keeping saving equal to net investment, in order that industry may continue without interruption. Discussion of this follows in the chapter on the business cycle.

CHAPTER XXII

PROFITS

THE Nature of Profits: A Business Differential.—Profits are an income from business enterprise. Unlike interest and rent they are always a gain from the double process of buying and selling. Unlike all three of the other channels of distribution thus far examined they are not of themselves a price of any service bought and sold in the market and no recourse to schedules of demand and supply will adequately explain their size. Rather they are a difference between two other sets of prices, viz. costs and selling values.

Unfortunately the term profits, as used in connection with different types of business organization, has no single and clearly defined meaning; and more than that the loose business use at its best is hardly satisfactory as an economic concept. Consider the use of the term by the individual type of entrepreneur, for instance the independent farmer, who owns his own land. With him profits generally mean the whole income for the year after expenditures for hired help, seed, tools, machinery, taxes, and other explicit outlays have been met. We know, however, from our previous chapters that all this cannot be profits in the economic sense. Capital goods, we have seen, claim rent, whether actually paid over or not. Finance capital must be allotted interest. The farmer himself and whatever members of his family are giving service must be allowed wages in keeping with what they could get in other lines of work. Much of the total must, therefore, be drawn off before we get down to true economic profits.

When we come to consider corporate business organization, we find some distinctions are made, but not in complete correspondence with correct economic usage. Interest is paid on the borrowed capital. Dividends are paid on stock both common and preferred. They are frequently spoken of as the return to invested capital. Certain amounts are carried to surplus and sometimes there is an increase in capital itself through stock dividends, etc. Finally, wages are paid to management, or at least some part of it, the president, vice-presidents, general and departmental managers, all being salaried officials in our large organizations. What then is profit?

The business man answers it is associated with dividends and with the undivided profits item which is carried to surplus for the increase of the business. The recipients are the stockholders, and more particularly the common stockholders.

This pronouncement is, however, not very clarifying. It fails to delineate satisfactorily just what elements are left as profits after the other three sections of income are accounted for, and for what services they are paid. Defining these matters is one of the economist's most difficult problems. Dividends as return to invested capital are not a true measure of interest. In prosperous times they are likely to be more; in hard times they may well be less. With "undivided profits" added to dividends, for our purpose, and the true interest on invested capital deducted, the remainder, if any, is profits.

Then again, wages as involved in the salaries of the higher executives are not likely to be a true measure of payment for labour service. Directors on the board and probably the president are not expecting to take their full reward that way. They are looking to profits in the form of dividends, extra stock, or increase in stock value. In other cases, dominating high priced executives name salaries for themselves well above the competitive wage they could ever expect to get. They are really taking profits and calling it salaries. Profits, therefore, seem to be tied in with the services of different factors and their rewarding. Whether we are referring to corporate or private industry, they are to be considered as a residue after all other costs are met. The essence of the problem, however, is to know just what to include in costs, when we cannot trust entirely to their contractual determination. It is, in fact, in this circumstance of the failure of the factors to determine their rewards through any definite contract and in some degree the failure of such definite contracts as are drawn up to represent the true price of the services given, that profits *are permitted* to exist. Largely these conditions are associated with investment (as contrasted with loan) capital and with the promotion and high management aspects of business enterprises. More exactly, however, they permeate the entire productive organization, wherever the expense price of a worker, a machine, or an item of any kind does not square with its productive value to the firm. Mostly they take their origin from changes developing in time, as where true economic rent draws away from the contracted rent. They associate with inability to adjust supply readily through small increments and decrements.

They arise out of differing abilities (or differing luck) in estimating in advance the true earning power of persons and goods as proven later by actual performance. But also—and here is where they associate with creativeness—in some degree they are due to the capacity of the particular firm to make a larger use of certain persons or goods than other firms could do. In other words, there is an addition to productiveness through bringing such persons or goods to this particular firm and this particular use. Emphasis upon this interpretation of profits as the return to creativeness is to be set in contrast with another view which sees profits entirely as a matter of "getting something for nothing" through a happy faculty of advance bargaining merely. It should be noted in this connection that profits are a remainder above contracted (or imputed) costs considering the whole business unit rather than a gain above cost figured on each particular item.

Do Profits Exist on Balance?—The question has often been debated, "Do profits exist on balance or do the losses through failures compensate entirely or even exceed the gains of the successful?" The matter has been considered of some importance because if the latter is true, profits may be a complete gift to society as consumers entering not at all into the prices of goods in the total. While they raise the price of some goods they reduce that of others. Doubtless this is a wrong way of viewing the whole economic scene. It would probably be well for consuming society if all enterprises were successful since most failures represent a poor use of resources. Nevertheless the question has some significance for us here.

The answer from experience is not decisive. Figures have been offered to show that in the total there are competitive losses rather than profits. Dr. Fabricant cites figures of net income as a percentage of capitalization for industrial groups in the United States across a period of years as follows:¹

Industrial group	1929	1930	1931	1932
Manufacturing.....	8.6	2.7	-1.0	-3.6
Construction.....	7.8	5.7	-0.9	-7.8
Public utilities and transportation.....	6.5	4.0	2.3	0.7
Trade.....	5.1	-0.5	-4.4	-7.2
All industries.....	6.6	2.4	-0.7	-0.9

When we subtract interest on invested capital, it is evident that a residue of profit was general over the industrial groups during the

¹Adapted from W. Spahr and Others, *Economic Principles and Problems* (New York, 1932), vol. II, p. 268.

prosperous year 1929, that in 1930 it was wiped out in manufacturing in the total and gave way to loss in the trade group. Thereafter loss became general. These figures include, of course, monopolistic as well as competitive elements. Figures for competitive industries alone would be much less favourable. The situation would resemble perhaps that of agriculture where pure competition prevails. It is very difficult, however, to estimate what a proper capitalization is and such percentage calculations should be received as tentative only.

Professor S. H. Slichter, again, presenting figures for retail merchandizing, hotel-keeping, and automobile manufacturing, finds a high rate of failures in business enterprises over a period of years, as contrasted with survivals.² It is his belief that after allowing for implicit elements of costs, profits as a total are non-existent. Admitting the inadequacy of his data for obtaining any definite proof, he is convinced that the returns to business owners upon their investment are, as a whole, less than the returns to lenders on long time loans. Business men, he argues, are inclined to be over-optimistic, basing their actions upon the record of existing enterprises without consulting that of the many which have failed. Furthermore, he estimates that the return to business owners upon their labour is probably less than the salaries or wages they might command as employees. The usual argument, he contends, that as entrepreneurs they must get more on an average over a period of time than as wage-earners or else they would not take the risk necessary to entrepreneurship, falls short of the truth because, (1) men fear more the insecurity of unemployment as wage-earners than they do the perils of failure in business (as entrepreneurs they at least have their jobs); and (2) men cherish independence and authority.

It is not our purpose to endorse these conclusions. It would seem that too much reliance is placed upon mere numbers of firms which, after all, are a poor index to national profits and losses. The survivors probably include more of those that operate on the grander scale than those that have fallen out, and furthermore many of them continue as monopolistic or semi-monopolistic profit takers. Nevertheless so far as competitive entrepreneurship is concerned, it is probably true that profits are at least equalized by losses in the total. Those who lose in business suffer in their losses what the successful make as profits, and society may be said to receive the total of all such entrepreneurial services for nothing. In this sense profits

²*Modern Economic Society* (New York, 1931), pp. 712 ff.

do not exist in a competitive economy. In the *particular*, profits do exist and it is necessary in our present economic organization that they should continue to exist. As prizes to be striven for they play their part and the fact that all who run may not capture them does not deter the many from entering the competition.

Non-competitive Profits.—Not less important than this finding, viz. that competitive profits in the total are non-existent, is the easy observation that profits in other conditions do exist abundantly and, moreover, that they are not always well related to the service given. The most significant thing in the whole picture is monopoly and the various forms of monopolistic competition where, without the excuse of risk or the contribution necessarily of any great entrepreneurial talent, firms adopt the practice of pricing their goods well above average unit cost and enjoy profits on a relatively permanent basis. Here profits do enter into price and they withstand the tendency to fade out in favour of the consumer. In some instances they bear particularly heavily on special areas of consumption, thus tending to particular hardships or the upsetting of the balance of the economy. In other cases their incidence is distributed fairly well over the whole population. Frequently monopolies and monopolistic competition lead the consumer away from his own best interests through offering him more and more extra services instead of lower prices. Monopolistic competition furthermore may be incapable of as low prices as either competition or monopoly because it fails to realize the optimum sized firms. Monopolies and trade associations, etc., as we have seen often indulge in unfair practices and conscienceless pressures on competitive groups around them other than consumers. Obviously the whole story is not told when we have summoned figures to show that profits are equalled by losses. It really fails to give the answer even of their effect upon consumers' prices. Beyond that the economic loss due to thousands of failures and the bad distribution that goes with the mosaic of profits and losses in an economy which features price competition in some parts, and imperfect competition and monopoly in others, must be taken into the count.

Theoretical Considerations: Wherein Profits Exist: (a) **Under Competition.**—As between various firms in a competitive field there are always differences in efficiency. Some are just meeting their costs; some are operating without meeting their entire overhead; others again are making temporary gains. Here is the picture of

profits distributed as to pluses and minuses and continuing within the competitive struggle.

(b) **Under Imperfect Competition.**—Under monopoly or imperfect competition, to the degree that average revenue of the firm is above average cost, there will be profit. And as between the different firms in the whole field there will be possible more liberal differentials in net earnings than under price competition.

(c) **Profits and Change.**—Approaching the matter somewhat differently we should note that profits have their basis largely in *change*—change as affecting any part of the whole economic scene. We have already implied this in our reference to time contracts above and the variance of their terms from the changing actual production condition. Remembering that increase in income from the particular capital good involves economic rent greater than contracted rent, we are left to conclude that increase in income to *the business unit* (not anticipated in the terms of contracts for cost items) is profit. We are tempted to separate profit into several parts, each of which would be associated with an unpaid service of a single factor. We would be led to assert that much of what is profits is really economic rent, unrequited earnings of workers, or of finance capital, if considered in relation to particular cost factors. Such reasoning, however, involves the error of assigning specific productivity to each factor different from the price paid for it. Production is co-operative and indivisible and profits relate to the whole business.

Change as affecting profits may be due to conditions entirely beyond the control of the firm making the profits as where a firm engaged in growing rubber is benefited by the development of the automobile; or again a change in price levels or a change in the tariff, due to a trade treaty and making for the possibility of higher prices in the product or perhaps a better market. Changes of this type, to the degree that they are unforeseen by the firm itself and hence unplanned for, result in what have been called "windfall" profits. In the total they are likely to be offset by losses somewhere else though not to the same firm—at least not at the time. To the degree, however, that enterprisers estimate changes and plan for them in advance, whether they are innovations within their own plants or developments beyond their control they are a fertile and sometimes a continuing source of profits. Where there is monopoly, as where an innovation is patented and thus retained for the

exclusive use of one firm, the profits are relatively permanent. Where there is product differentiation as, for example, where an innovation is associated directly with the name of the particular firm through phrasy advertising, they are likely to be somewhat lasting. Substantial profits, as a matter of fact, are found chiefly in connection with monopoly situations and under conditions of imperfect competition. Where there is free and perfect competition, as soon as they appear other firms enter the field lured by the hope of sharing in them. The assumptions of complete mobility imply that returns to entrepreneurs in profit form can never get far beyond what they would get in wages if they hired out their services to others plus what they would get in interest if they loaned their capital. Profits therefore are ever tending to zero.

These assumptions, however, make too heavy a demand upon the realities even of perfect competition. For the services of the entrepreneur in a competitive economy provide no machinery for their own measurement. Whereas with the other factors their shares are measured by buying and selling activities in their respective markets, no market exists for the buying and selling of entrepreneurial services. Furthermore, there is no measuring of units of entrepreneurial service at the margin against units of the other factors until units of equal importance equalize each other in cost as there is with labour and capital. No active mind exercises choice between the worth of entrepreneurial service and that of the other factors. For the entrepreneur is essentially "on his own." He judges but he is not judged. It is only subsequent to the utilization of the service that comparisons begin to be made. It is after profits are made that other firms are motivated to enter the competition; that those who up till now have been on salary perhaps change themselves into entrepreneurs. It is in the nature of the individualist economy that there should be a lag in the reduction and elimination of profits (and losses) even in the competitive situation. Add to this the circumstance of the large individual units that are necessary to effective competitive standing in many of our industries, and we have a further accession to that lag. Competition therefore, while it may operate against continuing and gross disparity between the rewards of firm and firm, and between the compensation to entrepreneurial as contrasted with labour services, can scarcely be trusted to equalize the two. In the latter type of equalization, furthermore, there is involved the task of choosing between the pain costs in two very different lines of activity to get an equal amount

of remuneration which is a harder proposition than making an entrepreneurial choice between two elements of expense.

Analysis under Imperfect Competition.—Great and continuing profits, however, are chiefly associated with monopoly, oligopoly, and product differentiation. It will not be necessary here to detail again the sources of monopoly.³ The reader will recall such conditions as complete control of a necessary raw material, control of some part of the process of manufacture through patent or trade secret, control of transportation, control of access to the market, etc. Nor will we need to do more than refer the reader to the price policy of the monopolist, his search for the point of maximum gain, and the retention of his parallelogram of profits.⁴ Little need be said either in review of the other conditions where price competition is lacking. Where it is a matter of trade associations, or sharing of a market by a limited number of firms through agreement, the situation with respect to profits may not be greatly different for a time from a condition of monopoly though it is likely to be less permanent. The chances are it will soon develop into a condition of product differentiation featuring a price higher than cost by means of goodwill, superior position with respect to some customers, ability to retain popular salesmen at salaries less than their worth to the firm, etc. Another source of monopoly advantage may exist on the basis of differential superiority of paid managers whose special worth is rooted in their social relationships and knowledge of their *present situation*. Hence the firm is able to retain them at less than their real value to it.

Akin to these in a sense and yet not to be classed in the same category is the differential ability in entrepreneurs themselves. Certain writers have elevated it to chief place in the causation of profits, characterizing it as the "rent of superior ability." As between different firms in the same industry it is frequently a great factor in the success of some at the expense of others which go into decline. While in the lowlier tasks of industry requiring muscular strength or routine mental effort there is generally no great difference among men in their productive ability, this is not true of the more spiritual callings. Only a few have the rare qualities of courage and foresight to become great business leaders. That complex of qualities whatever they may be that make for entrepreneurial success—energy, resourcefulness, courage, singleness of

³See *supra*, chap. XII.

⁴See *supra*, chap. XVI.

purpose, and keen sense of reality; and on the less complimentary side, competitive hardness, unscrupulousness, and unconcern for the fate of those who stand in the way of business—is found in men in very differing degree. The reader will doubtless be able to summon to mind examples of enterprises where a shoe factory, a foundry perhaps, or a printing firm has stood above its field of competitors across a period of years on a steady basis of profits for no apparent reason other than the superior ability of its leading personality. Corporations frequently attest to this when they cover their chief executives with heavy insurance. Superior ability may well be the basis of the most continuing profit.

Social Functions of Profits.—We have acknowledged the social functions of interest and wages. We have considered a challenge to the social function of land rent. What are we now to say of profits? The answer must be developed along several lines. In the first place, it is argued that profits are the stimulator of entrepreneurial efficiency. In a sense they operate like piece wages. The more energy and thought an entrepreneur puts into his leadership, inasmuch as the other claims on the product are measured and somewhat definite, the greater will be the residue for him. No system of set salaries, it has been contended in answer to the socialists, will ever take the place of the lure of profits in bringing out the qualities of imagination and initiative so necessary to progressive entrepreneurship. In the second place, profits are seen as an automatic device for bringing about the most efficient and fullest use of all resources, human, natural, and man-produced. In order to appreciate this it is only necessary to remember that entrepreneurs must compete for funds. Investment naturally flows to the point where profits are being made and hence funds gravitate into the hands of the most competent enterprisers which in turn guarantees most efficient use. For an able entrepreneur does not allow capital to lie idle if he can help it, and collectively able entrepreneurs organize the fullest complement of workers to exploit natural resources as fast as possible. Thirdly, profits are relied on to regulate the amount of goods of each particular kind that will be produced. Where demand for a commodity or service fails, profits fall with dropping price, capital ceases to be invested and flows into productive industries where profits are greater. Finally, profits are seen as assisting interest in the automatic regulation of the comparative portions of the national income that will be saved or consumed, and consequently they determine indirectly the correct amount of production

as a total in the immediate future. People are motivated to save by the prospects of having capital to venture at a risk with a possibility of high gain, as well as by considerations of pure interest. At times when profits are large the tendency is for firms to plough back more into the enterprise, and for stockholders to reinvest more of their incomes in order to benefit from the anticipated continuance of high returns. Some time later, however, it is found that the increased plant is producing more than consumers can buy. Profits fall off immediately—with interest following suit but more tardily—and the recipients of the lessened returns see small cause to make sacrifices to save when there is so little in it. National income, therefore, responding to the decrease in profits, as well as interest, is turned largely to consumption purposes. Total production is brought back into relation with consumption strength.

This is an imposing list of meritorious counts. Profits it would seem are the stimulator, they serve as a barometer, they distribute the resources, they furnish the controls, for the whole productive system. But this is a case in theory. It overlooks the delays and the frictions. It assumes mobility and competition. Some of the points do not hold for monopoly. Others do not work out with satisfaction even under pure competition. That profits are always the best stimulator for entrepreneurial efficiency is challenged in practice. There seems to be reason to think they serve well in the promotion aspects of industry, but that for organized enterprises they might be largely dispensed with. In fact they have been. They do not square with total entrepreneurial services. Under monopoly conditions again profits are as liable to lead to the restricting of production as they are to furthering it. That they bring about the most complete and efficient use of resources is also questioned. In a competitive economy we have seen how the lure of individual profits leads to waste in the production of petroleum, lumber, coal, etc., and that it throws away the energies of men over fifty years of age. We are to learn likewise that the lure of rising profits causes producers to outdo the market with the result that vast resources in men and capital are forced into periodic idleness. That profits regulate the amounts of goods in total and in the particular, and maintain the balance between production and consumption, may be true in the very long run, but the control is much too tardy. Moreover, they lead industry to produce for a demand that is not a measure of wants as experienced by the majority and are themselves a cause of demand failing to reflect wants. That maximum possibilities of

production for human wants are being realized no thoughtful person will assert.

Many are coming to believe, therefore, that a system where production and the use of resources are purely incidental to profits is inherently incompetent and bad. They feel that control should emanate from a broader base including the various interests of society rather than deriving so completely from those who have ventured some capital and are steering industry for their own gain. It is well that power and foresight should go together but, granted that entrepreneurs are well gifted with respect to the latter, the foresight should be directed in behalf of social welfare and not to the service of any particular group. Others more solicitous for established institutions would retain the benefits coming from profits but would attempt to safeguard these other interests by other means. Some of these, such as measures for the protection of consumers and regulations for the conservation of natural resources, we have already studied. Others such as minimum wage laws, social insurance, and equalizing taxation, we have yet to consider.

Profits and Risk-taking.—The above are social considerations of incidental results—attempts to evaluate what benefits come to *society* through the profit system. But more directly for what peculiar activities or services do we reward entrepreneurs? Strictly the answer is, "We do not pay them for anything. They make their gains off us." Nevertheless, in looking over the field after the game, we do recognize certain services which if we had had to purchase directly we should have done so. Some economists have reduced these to one. They have declared that profits in a competitive economy are entirely a reward to enlightened risk-taking, a return to investment capital above and beyond the interest rate. With this position we cannot agree. While profits are to be associated with investment of capital (or services), this extreme view stresses too exclusively the point of view of the investor. It features too much the passive aspect of entrepreneurship as seen in the quiescent stockholder who for the most part invests his funds and thinks only of the enterprise in dividends hoped for. It is unreal and unserviceable in analysing the fortunes of the Woolworths, Beaverbrooks, Wrigleys, and Fords, who have made great fortunes through lives of active venturing. Under monopoly conditions we know it is untrue for in many cases great profits are made with comparatively little risk. We also believe it to be untenable for competition. The essence of profit-making in a competitive society is a

blend of leadership and risk-taking. The two may rarely be considered apart. Pure risk-taking as of the uninformed investor is merely gambling while that of the average stockholder is somewhat better. But entrepreneurial risk in the total is so much a function of the foresight and wisdom, i.e. the human effort bestowed upon it, that the two become really aspects of a common process. Risk drops in direct relation to the ability and the energy shown. Profits in truth are a reward for risk-overcoming rather than for risk-taking. But to impute a wage into the situation sufficient to cover the whole reward to this kind of effort would be neither logical nor practical (though we may logically impute a fair or competitive wage).

This method of imputation, however, while its dangers should be appreciated, may not be thrown out of court as unserviceable in the explanation of profit. Where contractual arrangements do not exist, it should be resorted to, as for instance where a farmer does a lot of the work on his own farm he should be allowed a wage governed by what his type of person could command if he were not there employed. Likewise the regular rate of interest should be allowed on his own capital invested in the farm and its equipment. Implicit rewards in fact may be associated with any factor.⁵ The full definition of profits, therefore, worded to incorporate this thought, might read, *Profits are the return to entrepreneurship, being the net income of an enterprise, or the difference between the income and the costs where costs involve rent, interest, and wages whether defined by contract, or defined implicitly at periods in advance of product similar to those that would have obtained had there been contracts.*

The Matter of Factorial Justice.—At the close of our study of functional distribution we may well pause for a moment to raise the question, "Does justice obtain as between the factors?" Apart altogether from the question of individual justice, does each factor get what it produces?

Some economists have held that, so far as functional distribution is concerned, justice holds in a competitive order; that each of the factors is rewarded according to its service to society. To illustrate, let us consider the reward of labour. The last or marginal labourer in the descending series adds, they have said, just enough to the product of the enterprise to equal his wage. All the labourers being of like type, each and every one is responsible for the same amount

⁵Some economists use the expression "opportunity costs" to cover all such implicit rewards. They are determined by what the factors could make out of other opportunities of employment.

of product as the last man. And being paid the same wage as the latter, therefore each gets just what he produces.

This is entirely an error based upon a misconception of marginal functioning. There is more product produced, it is true, by the enterprise, but the excess is to be attributed to all the factors (or to their co-operative effort), not to the final labourer. Similarly, taking any other factor the true meaning of the margin must be understood. The marginal product of no factor can be called its specific product nor the marginal productivity theory of distribution the "specific productivity theory."

In some sense, however, this controversy is empty for the purpose at hand. After all, justice is a matter between men and not between men and inert objects. Not land but the ownership of land; not capital but the ownership of capital, is the real issue. Even granted the truth of the specific productivity claims, if institutions are ordered on a basis of unfairness distribution cannot be just. The true norm of justice calling for reward to conform with service must refer to individuals—not to factors. Sharing should run according to function performed by the individual be he landlord, capitalist, or labourer. If property rights, for instance, establish a claim upon income without any service having been performed by the owners, distribution, on the basis of function, is interfered with and justice is not done.

CHAPTER XXIII

MONEY

A MAN enters a retail store and asks for a dollar's worth of sugar. A plumber tells you he will do your job at a dollar and a quarter an hour. A corporation proposes to float a new issue of securities as it wants a hundred thousand dollars to extend its plant. All is in terms of money. Money a measure of the value of commodities! Money a procurer of services! Money an indispensable aid in production! What is money? How does it differ from other things of value? Whence comes it? Why so many different kinds of it? If it is so necessary to economic activity why do not banks and governments provide us with more of it? To answer these and similar questions is the aim of this chapter.

The Nature and Functions of Money.—Money may be defined as a universally acceptable means of payment. This is a definition of perfect money. As the ordinary currency of practically all nations is not accepted internationally to any extent, the above description is not strictly applicable to the bulk of the circulating media of the modern world. It does stress, however, one of money's chief functions, namely, acting as a *medium of exchange*. So long as people lived in a barter economy—the direct exchange of goods for goods—trade and industry were greatly hampered. It was difficult for an individual having a surplus of commodities to trade to find another individual with whom he could "make a deal." Our modern system of division of labour, we have said, is based upon the exchange of products, but in the majority of instances today a man or a firm does not directly exchange the commodity which he produces for some other commodity. The typical transaction is rather the sale or the exchange of the product for money or claim upon money, the expectation being that that money so received will be used in the near future to obtain the commodity or the service which the producer of the first commodity desires. In essence, therefore, most exchanges of commodities which are the final aim of production consist of two transactions, an exchange of a commodity for money and an exchange of the money for the commodity desired. As the

term indicates, money is a go-between or a medium of exchange. Furthermore, even where there is attempted a direct exchange of commodities, the chances are that the value of the one commodity will not be exactly the same as that of the other, and he who receives the less valuable commodity will require something in addition to equate the transaction. This purpose money also serves in a thousand and one instances every day.

The second reason for the existence of money is to serve as a *measure of value*. Since trade began there has been a need for some means of comparing the values of any commodity against another as they move in exchange. The word "price" has become part and parcel of our conversation, but until some commodity has been chosen to fulfil this purpose of expressing the value of other commodities, there was no such concept in the minds of people as now exists when we use the word price. Commodities could not be exchanged for each other without some mental comparison of their relative values. Price was a device whereby this comparison could be made more accurate. Pricing is simply the measuring of the values of any commodity in terms of some one commodity chosen as standard, that standard being money. Price is value expressed in terms of money. Money considered thus has been variously called a standard of value, common denominator of value, or as some have phrased it in homely comparison, the "yardstick."

The third function of money is of the same nature as the second except that it introduces the element of time. Not only do we need a measure to compare the values of commodities and services in the present, but we also need a means of measuring off today the same amount of value that we borrowed or otherwise received, sometime previously, say a year ago. Calculations must be made both forward and back. Time is of the essence of many contracts. Payment, in other words, for many goods received, is deferred rather than immediate. This function of money is to serve as a measure or *standard of deferred payments*. To illustrate the matter let us consider the case of a man buying a house. The price as agreed upon is \$10,000. In this statement we see money functioning as a measure of value. He pays \$5,000 down in bank notes. Here we have money as a medium of exchange. But the other half of the principal is left for the future to be paid in one year's time. How shall it be paid and with what? Shall it be wheat? Shall it be days'-work? Shall it be cash? Most probably the latter, but it might be any of them or something else quite different. The point

we wish to make is that the terms call for \$5,000 worth of something which shall be paid at that time (plus interest).¹ In this act of measuring value across the twelve months we have money performing its third function. Most borrowing and lending today, even the selling of groceries on credit, uses money in this role.

The fourth function of money is that of serving as a *store of value*. When I carry money in my pocket, it represents value or purchasing power stored up for use when occasion arises. When I become afraid of the future solvency of the banking system and draw out my money and hoard it, I am using money as a store of value. Like the third function, this has to do with time. It is less important today than in the past except as it operates incidental to convenience. We do not deliberately store value in money to any great extent. We prefer rather to invest our money or put it in the bank where it will yield us an increase. Money deposited in a bank illustrates its third rather than its fourth function.

Types of Money: (1) Standard Money.—There are four main forms of modern money. In modern times *standard money* has consisted in the main of gold and silver. Sometimes it has been the one, sometimes the other, occasionally both. During the twentieth century so far as the leading civilized nations are concerned, gold has reigned as standard with certain notable defections associated with war and a tendency to general hesitancy for most of the world at this date of writing. Standard metal money sometimes takes the form of a coin but is more largely held as bullion and serves its money purpose by acting as a reserve for the various other forms of money and other circulating media. The value of the metal contained in the coin is approximately equal to the value of the coin itself. The term "full-bodied" is sometimes used to describe this type of money. A comparatively small amount of gold actually circulates in Anglo-Saxon countries today. The Government of the United States, in fact, has recently been endeavouring to draw the whole monetary gold resources of that nation into the keeping of the Federal Treasury. Gold serves, therefore, as a standard and as a base of security rather than for a medium of exchange.

Although gold was the chief standard money material of advanced countries up to 1914, the difficulties of maintaining such a system during and after World War I led to the abandonment of gold and the adoption of the paper standard. A country which,

¹If the terms were \$5,000 cash down and a certain piece of land in two years, money would not be serving this function.

under ordinary circumstances, does not permit individuals to exchange government-issued paper money for the nominally standard metallic money is on a paper standard. The paper money issued directly by the government or by its agent, the central bank, becomes the standard—if it is made full *legal tender*. That form of money which, if offered in exchange of debt, must be accepted without limit as to quantity is said to be full legal tender. A paper standard, therefore, may be defined as non-redeemable paper money which has the character of full legal tender and into which all other forms of government currency are freely convertible.

(2) **Government Non-standard Paper Money.**—Government paper money other than standard currency is issued in most countries. Normally it takes the form of a promise by the government to pay standard money on demand. It may be secured dollar for dollar by metallic standard money, in which case it is called representative currency, meaning that it merely represents a certain value of standard money held in reserve. Or it may be backed by some percentage of the standard relying upon the holders not presenting the whole outstanding quantity at any one time. By keeping it circulating, reissuing it through the banks as it is paid in, governments are enabled to keep a fairly constant quantity outstanding. Although maintaining only a partial reserve, the government intends to meet every call for redemption of such notes. Nevertheless, there is an element of trust on the part of the people who receive such paper and the term used to designate money of this kind is *fiduciary money*. A third type of government money is the so-called *fiat* currency, meaning that its worth depends entirely upon a command of the government that it shall be received by the people. It may take the form of a piece of paper stating simply "this is a dollar" or "this is so much money." No pretence is made that it has standard backing or backing of any kind. Nothing is said about its redemption. Fiduciary money has frequently slipped down in the fiat class owing to the government failing to make good its promise when it has been presented. Interesting experiments in money have been made by governments issuing notes which can scarcely be said to come under any of these categories, through naming as security behind such issues goods possessing intrinsic value other than standard money. The reason for the use of both fiduciary and fiat currencies is to economize in the use of gold. For the most part, experiments with fiat money have been associated with the stressful conditions of carrying on war. An issue of paper

money is probably the quickest way of raising funds. Under such circumstances fiat money tends to become the standard—i.e., a paper standard.

(3) **Bank Notes.**—Central and commercial banks issue promises to pay very much the same as do governments, although the tendency in recent times is to curtail this privilege so far as commercial banks are concerned. Banking institutions issue notes subject to conditions of security somewhat analogous to those applying to governments. Frequently, it is against a percentage basis of gold, which, in general, is the method followed by the central banks of Canada and the United States. In some cases, it is a matter of backing one hundred per cent in government bonds or, perhaps, other safe securities. Canadian commercial banks issue notes against their general assets. These notes are being withdrawn from circulation.

(4) **Subsidiary Money.**—Bills and standard coins are issued only in round denominations. Speaking with reference to our own monetary system, they are in terms of dollars and multiples thereof. In connection with the completing of many transactions, it is necessary to carry the accounting to finer terms. To this end subsidiary coins—silver, nickel, and bronze—and, in lesser degree, scrip, are used. Of these, in Canada, some sixty million dollars, more or less, have been maintained in circulation since 1943. It is believed by many people that a quarter is worth twenty-five cents because of its silver content. In reality that has little to do with its value. At times the metal content has approximated to its face value; at others it has dropped to half this sum. It holds its value rather because of its exchangeability with other forms of money and ultimately with gold. Its volume in the circulatory currency of any country is rather closely defined by the need of small "change" and this need in turn is determined by the business habits of the people. Subsidiary money is of limited legal tender. In Canada silver is legally adequate in discharge of debt to the amount of \$10.00; nickel, \$5.00; and bronze, \$0.25.

From one point of view the significant distinction as between these different forms of money is that between standard money and all the rest. The function of the former is to measure value. It may or may not circulate. That of the others is to assist in making exchanges. This is not the whole story. We shall see in the chapters following how the extension or shrinkage of credit, of which paper money constitutes a part, has much to do with price levels and the volume of commodity production itself, but that is running

ahead of our story. Our point here is that standard money is distinctive in its function and significance and seems to be in the way of becoming more so. Its relation to other forms of money and to bank credit should be appreciated.

Bank Credit as Money.—There are two forms of bank credit, notes and deposits. We have included the former in our definition of money, what about the latter? A large percentage of business transactions in Canada, the United States, and other economically advanced countries are carried on through the medium of bank deposits rather than hand-to-hand currency. Owing to this fact many authorities include deposits, particularly those subject to cheque, in the category of money. Since these deposits constitute such a large element in our circulating media there is considerable justification for this view. For example, the amount of bank deposits in Canada from 1931 to 1935 was roughly twelve times that of outside currency, that is, other means of payment in the hands of the public. Bank deposits and non-standard money alike perform the medium of exchange function. They also act as stores of value. Another common characteristic is that both introduce a fiduciary principle, building up a circulating medium far beyond the gold backing.

On the contrary, if we look upon money as a universally acceptable means of payment (even within national boundaries), bank deposits must be ruled out because they do not circulate freely. Endorsement of cheques is necessary and not infrequently the banks require identification of the payee. The difficulties of definition may be overcome largely by distinguishing between money in the *narrow sense*, applying only to those forms of circulating media which are generally acceptable, and money in the *broad sense*, which includes the above plus bank deposits. Some writers make a distinction between money, currency, and credit. The first is restricted to standard or full legal tender money; the second includes all widely acceptable media of exchange; and the third applies to bank deposits. The choice of definition in itself is not very important, but when using the word "money" we ought to be specific as to what we incorporate in our conception of the term.

Types of Money in Canada.—The following table shows the amounts of the various kinds of money in Canada at the end of December, 1946. Practically all of the monetary forms we have discussed are exemplified here.

The non-circulatory money forms a basis for the superstructure of circulating media. Circulating money refers to the sum total of

TABLE XXI

TYPES OF MONEY IN CANADA, DECEMBER 31, 1946*

(Millions of dollars)

Non-circulating money held by

1. Foreign Exchange Control Board	
(a) Gold.....	\$536.0
(b) U.S.A. dollars.....	686.2
(c) Sterling.....	6.3
2. Dominion Government (Gold and U.S. dollars).....	22.6
3. Chartered Banks	
(a) Bank of Canada notes.....	176.9
(b) Deposits with the Bank of Canada.....	565.5

Total non-circulating money..... \$ 1,993.5

Circulating Money

1. Government Money	
(a) Bank of Canada notes held by public†.....	1,009.0
(b) Subsidiary coins (1) Silver.....\$	59.9
(2) Nickel.....	5.1
(3) Bronze.....	8.0
(4) Other.....	2.7

Total subsidiary coins..... 75.7

Total government money in circulation..... 1,084.7

2. Commercial Bank Money	
(a) Notes held by public.....	21.0
(b) Deposits held by public (1) Demand.....	2,291.0
(2) Notice‡.....	3,469.0

Total commercial bank
money held by public..... 5,781.0

Total circulating money held by public..... 6,865.7

3. Dominion Government and Other Deposits with	
(a) Bank of Canada.....	175.0
(b) Commercial banks.....	535.0

Total government deposits..... 710.0

Total volume of circulating money..... 7,575.7

Total volume of money..... 9,569.2

*Source: Bank of Canada, *Annual Report to Minister of Finance*, 1946; Foreign Exchange Control Board, *Annual Report to Minister of Finance*, 1946; *Canada Year Book*, 1947.

†As the Bank of Canada is owned and controlled by the Dominion government its notes are listed as government money.

‡With certain restrictions notice deposits in Canada are subject to cheque.

means of payment in the hands of the public plus government deposits. Table XXI can be used to illustrate money in the "narrow" or "broad" sense. If the former view is taken, bank deposits are excluded; if the latter, they are included. Since Canada's departure from the gold standard in 1931, the whole government paper structure (Bank of Canada notes) might be classified as fiat money. This situation was emphasized by the transfer of the Bank of Canada's gold holdings to the Foreign Exchange Control Board in 1940. As will be explained later, Canada now has a "managed currency."

For comparison the following table sets forth the monetary structure of the United States.

TABLE XXII
TYPES OF MONEY IN THE UNITED STATES
AS AT THE END OF JUNE, 1947

GOVERNMENT AND CENTRAL BANK MONEY (Millions of dollars)						
	Total out- stand- ing	Money Held in the Treasury			Money Held by Federal Reserve Banks and Agents	Money in Circu- lation
		Against	Treasury Cash	For Federal Reserve Banks and Agents		
Gold.....	21,266	20,087	1,180	.....	.....	.....
Gold certificates.....	20,087	.....	.....	17,224	2,815	48
Federal Reserve notes..	24,780	.....	67	.....	715	23,999
Treasury currency— total.....	4,552	2,232*	68	.....	234	4,250
Standard silver dollars.....	493	308	34	.....	3	148
Silver bullion.....	1,924	1,924	.....	.....	.....	.....
Silver certificates and Treasury notes of 1890.....	2,232	.....	.....	.....	170	2,062
Subsidiary silver coin	923	.....	20	.....	27	876
Minor coin.....	349	.....	11	.....	7	331
United States notes..	347	.....	3	.....	23	320
Federal Reserve Bank notes.....	409	.....	1	.....	3	406
National Bank notes..	107	.....	.....	.....	1	106
Total.....		22,319	1,314	17,224	3,764	28,297

 COMMERCIAL BANK MONEY

Deposits payable to:

Public

Demand.....\$ 82,500

Time.....34,700

Government.....1,000

Total Commercial Bank deposits.....\$ 118,200

Other deposits:

(i.e. time deposits in)

Mutual Savings banks.....\$ 17,500

Postal Savings System.....3,400

Total other deposits.....20,900

Grand total deposits.....\$ 139,100

 Total Volume of Money.....\$ 167,397

Source: Federal Reserve Bulletin, August, 1947, pp. 995-7.

*To avoid duplication, amount of silver dollars and bullion held as security against silver certificates and Treasury notes of 1890 outstanding is not included in total Treasury currency outstanding.

Evolution of the Acceptability of Money.—The story of the gradual evolution of value-measure out of a background of simple barter of good for good, is interesting no less on its objective side with its crude, early tentative choices of substances used, than it is as an index of increasing exactness and refinement of human thought in this important sphere. It takes its place with those other triumphs of the human brain as the race has gone on to greater and greater precision in its knowledge and control of its environment, such as the development of devices for measuring distance, area, volume, heat and light, speed, etc. So far as we know, the men of the stone age had no measure of value. Even today among primitive peoples, the anthropologists inform us, there is frequently no means and no attitude toward any exact equating in exchanges of goods. The nearest approach to a *quid pro quo*, similar to what we have in trading relations, is a making of presents in the expectation that sooner or later the person benefiting from such a gift will make a present of no less merit in return. Such practices and outlook involving a mingling of different sentiments and intentions are hostile to the rise of commerce. Only with the development of deliberate bartering attitudes could progress in this direction be

made. With this development an accomplished fact to overcome the difficulties of barter, money was gradually invented. Money arose as a result of trading relations and, once invented, became an indispensable assistant to trade. As time has gone on, it has likewise become indispensable to production in our complex economy. Where a satisfactory monetary system has been lacking, production has faltered and trade has been dammed up. We have seen all this in our own day in the economic difficulties of European countries since World War I and in the present handicaps in the exchanging of international commodities.

Coinage.—Coinage as we have it today is a plural process and the result of a long evolution. It appears to have originated in the early practice of using seals to signify possession or to ratify contracts, which thereby came to indicate authority. Quite naturally when a ruler came to certify the weights of pieces of metal he employed his seal to make the fact known. In the early examples no attempt seems to have been made to guard against clipping or otherwise lessening the original piece. This was a later development. The main objects of coinage today in addition to naming the value of the coin are to prevent fraudulent removal of metal from its content, to reduce the loss from wear, to prevent counterfeiting, and in some degree to make it an artistic and historical monument of the state issuing it.²

To accomplish these objects, says Horace White,³ involves four steps. The metal after it has been melted and refined of dross and cooled, is assayed or tested at various points to ensure uniformity and purity; the prescribed amount of alloy is then added, through remelting and mixing, to give it the necessary hardness; after this the bullion is rolled into strips of suitable width and thickness, cut into circular pieces which in turn are "milled" or raised at the rim, stamped and serrated around the circumference. The stamp indicates and guarantees the value. No weighing is necessary. The milled edge lessens the wear through abrasion. The exact tracing of the stamp defeats attempts at counterfeiting and the mechanical finish of the whole guards against chipping or other attempts at reducing.

A precious metal used today as standard money is given "free" coinage, by which is meant it is taken in unlimited quantity from

²See quotation from W. S. Jevons in H. G. Moulton (ed.), *Principles of Money and Banking* (Chicago, 1917), p. 78.

³Horace White, *Money and Banking* (Boston, 1895; 6th ed. 1935).

those who would sell it, and returned in the form of coin or equivalent. Coinage is not entirely free in the literal sense as regards the carrying through of the whole process described above. A charge known as "brassage" is made for providing the alloy and performing the refining process. The minting itself of the prepared bullion is, however, done gratuitously. In former days coinage was looked upon as a source of revenue by the lord or king and a considerable toll or seigniorage was retained in the hands of the coiner. This, however, is a thing of the past in Anglo-Saxon countries. The seller of the metal loses nothing of its worth. For the most part, he takes payment in more convenient forms of money and his gold is refined, alloyed, and frequently kept in bullion form by the government.

As regards subsidiary coins, i.e. those other than gold, in Canada the metal content is always worth less than the face value. Some revenue, therefore, accrues to government through their coinage. Directly or indirectly, however, they are redeemable in gold and their value keeps at par. Inasmuch as they are a much needed element in our circulation, it has been contended that they would retain face value apart from this so long as they were properly limited in quantity. The subsidiary coins are the silver dollar,⁴ half-dollar, quarter-dollar, dime and five-cent piece, the nickel and the cent. The United States coinage system, generally speaking, parallels that of Canada except that a wider use is made of the silver dollar.

Meaning of the Gold Standard.—We have made the distinction above between standard and non-standard money, noting their respective functions. To a citizen of Canada, the United States, or in fact most any country in the Occidental world previous to World War I, standard money had come to mean gold. Britain adopted the gold standard in 1824. She was forced to leave it during the war years but struggled back in 1925 only to be forced off again in the autumn of 1931. The United States formally adopted it in 1900 (although for practical purposes she had been following it long before) and only gave it up in 1933. During the stressful years of World War I she was the only great nation to maintain herself on

⁴Although the Currency Act of 1910 made provision for a silver dollar, this type of coin was not struck until 1935, when a limited issue was made as a jubilee coin. An additional number of silver dollars were coined on the occasion of the Royal Visit to Canada in 1939. Such coins are held as souvenirs and quickly tend to disappear from circulation.

the gold. Canada's experience has roughly paralleled that of Great Britain. So much for the facts, but it behooves us now to get a better understanding of just what is involved in the term gold standard, and why nations are forced under unusual conditions to leave it. Most people, including some of our statesmen, are vague about what the term means.

There are three forms of the gold standard. The first of these is the *gold currency standard*. Its fundamental characteristics are as follows: (1) the defining of the amount of gold that shall be contained in the standard monetary unit; (2) free coinage of gold; (3) the unrestricted convertibility of subsidiary coin and government paper currency into gold; (4) the buying and selling of gold in unlimited quantities *at a fixed price* by the government or its agent and the unrestricted melting of gold coin into bullion, in other words the free passage of gold between its monetary and commercial uses; and (5) the unrestricted export and import of gold.

This was the system adhered to by Canada and Great Britain before World War I, and by the United States till 1933. Canada defined her dollar as consisting of 23.22 grains of pure gold and gold was freely bought and sold by the Government at the fixed price of \$20.67 per ounce. The same provisions applied to the American dollar. The British pound contained 4.866 times as much fine gold as the dollar, but the price of gold was the same in England in terms of dollars. Today we are not on the gold standard. Although the Canadian dollar is still defined as above, the legal provisions regarding free convertibility, fixed price, and unrestricted importation and exportation have been suspended. In view of present world conditions they will probably remain thus for an indefinite period. During the monetary troubles of the early thirties, the government's buying price of gold was no longer fixed at \$20.67 per ounce. Since 1934 it has been approximately the same as the American price, namely \$35.00 per ounce.⁵

The necessity of economizing in gold led to a modification of the above described system. This is known as the *gold bullion standard*. Under this scheme gold coins no longer circulate but are placed in the central bank for reserve purposes. Consequently unrestricted convertibility no longer applies. It is possible, however, to secure gold bars in large amounts at a fixed price. Frequently such bullion is exported for the purpose of settling international balances. Great Britain was on a gold bullion standard from 1925 to 1931.

⁵At present (1948) the Canadian dollar contains about 13.71 grains of fine gold.

According to this arrangement, Bank of England notes were redeemable in gold bars weighing not less than 400 ounces and worth approximately \$8000.00. Hence it was very difficult for an individual to secure gold in small quantities, yet the arrangement tended to keep other forms of currency on a par with the standard money. The United States adopted the gold bullion standard in 1934.

The third type of monetary system based on gold is the *gold exchange standard*. A country choosing this standard links its monetary unit not directly to gold but to the currency of another country which is on either the gold coinage or gold bullion standard. The government undertakes to buy and sell freely the foreign exchange of the gold standard country at a fixed price in terms of its own currency. So long as the foreign exchange thus secured is convertible into gold, the monetary unit of the country on a gold exchange standard will not depreciate. Much depends upon the financial soundness of the gold-holding country. The gold exchange standard is also a device for the economizing of gold. One stock of the precious metal can be made to serve as a monetary base for two or more countries.

And why do nations have to leave the gold standard? The answer lies in the nature of modern credit. We have already explained in part that much of our money is fiduciary in type; it involves the government in the responsibility of paying it immediately in gold when the demand is made even though it is only supported by a percentage of metal. We are to learn in the next chapter that banking operations are likewise fiduciary and that governments become liable either legally or morally according to the nature of the national banking arrangements, to support banks when they are tottering for lack of gold to make good their promises. Recently, as we shall soon explain, the difficulties of maintaining gold standards have been connected for the most part with the unrelenting demands of international trade and investments.

The Need of Keeping Non-standard Money Redeemable: Lessons from Different Lands.—Forms of money that are readily convertible into standard money are generally acceptable in exchange and will circulate at par. When a person knows he has only to present a ten dollar bill at his bank to get ten dollars in gold or other standard there is no reason why he should not rate it equal to the standard. Forms of money that are not readily convertible will, in almost every case, drop below their face value, how far they will drop depending upon a number of circumstances. This does not

mean that they cease to be money. They may still be generally acceptable in exchange, though at a discount. Many people have the idea that money owes its purchasing power to the fact that it is "backed by the government." Especially if the government has declared certain paper money legal tender, there is a tendency to place great faith in its potency. Such factors do enter in, in giving such money general acceptability. They may even exert some influence in preventing it from falling as rapidly in value but they will not maintain it at par. General acceptability is a matter of public confidence. It may rest on habit, custom, belief in the magical powers of government, faith in a banking system, or upon exact theoretical reasoning regarding the real merit of a certain kind of money. Maintenance of parity with standard money is quite another matter resting on somewhat different principles. Experience proves that wherever paper money has been issued in considerable quantities and left without the support of free convertibility arrangements it soon falls in value. From this situation a whole train of difficulties arise, both economical and fiscal. To have a number of forms of money in a country fluctuating in value with respect to each other is, to say the least, disconcerting and confusing to all who endeavour to carry on trade. A few of the most instructive instances of nations experimenting with inconvertible money to their own discomfiture follow below.

(1) **The American Greenbacks.**—These notes were issued by the Federal Government of the United States under the exigencies of civil war. They were made *full* legal tender, which is to say legally acceptable *at face* in payments of debts, except for (1) payment of duties on imports and (2) payment by the Government of interest on the public debt. Congress appears in taking the step to have been confronted by a number of fears. At such a crisis it was feared that unless the notes were made legal tender they might not enjoy sufficient confidence to be accepted by the people. That there were misgivings in Congress itself about their future is reflected by the first exception. Congress did not see fit to jeopardize its regular main source of revenue through having customs duties paid in any money inferior to gold. The explanation of the second exception is that the nation was at the same time borrowing through the issue of large quantities of bonds and it was feared that making interest payable in questionable paper notes would handicap their sale.

The greenbacks, we have said, though promissory notes on the

Government were not immediately redeemable. The expectation was that they would be made so as soon as possible, which meant vaguely after the war. They depreciated almost from the beginning. The legal tender quality, however, brought them rapidly into circulation. For it is a well-known monetary principle where two kinds of money are receivable at par in payment of debts, and where one is of lesser worth than the other, the debtor will always in his own interest use the cheaper money to pay his bill. There was therefore no difficulty about their general acceptability. The Government having taken action to make bank notes redeemable in greenbacks, the time soon came when they became the real basis of the country's monetary system. Specie and its representative moneys disappeared from circulation leaving the field to those irredeemable, depreciated notes and other paper forms redeemable in them. For a space of seventeen years from 1862 to 1879 the business relations of the United States were carried on under what amounted to a pure fiat money system though the ultimate return to a specie basis was always intended as implied in the written promise of the greenbacks. Their value, meanwhile, fell and rose in terms of gold, fluctuating at first largely in accordance with the degree of success of the federal cause in the war, and later probably in relation to the balance of trade in international dealings. At one time they were worth less than forty cents on the dollar and even the subsidiary silver coins, becoming more valuable for their metal content than as money, disappeared from circulation. Finally, the Government, being stocked with a considerable supply of gold, made known its intention to make them redeemable. This had the effect of causing them to return almost at once to par and when its ability to carry through this promise was demonstrated few people desired to present them.

It is apparent to the students of money who have since investigated this experiment that in addition to the confusion and injustices among the people that these fluctuations in money values must have caused, the United States Government itself lost far more than it gained through the issue of the greenbacks. As we have seen, in order to sell its bonds to advantage, it arranged to pay both interest and principal in gold. On the other hand, it accepted greenbacks in payment for the bonds as it sold them. It was thus in the unfortunate position toward the close of the war in paying 5 or 6 per cent interest on securities which, selling at par, were only bringing in half their face value in actual purchasing power. With respect to govern-

ment receipts from taxes the situation was somewhat better. Some taxes, including customs duties as we have seen, were payable in specie, and all *ad valorem* taxes, moreover, were affected by the general price rise due to the greenbacks. Only where taxes were *specific* (so much on the piece or the pound, etc.) and where they were receivable in greenbacks or other depreciated currency did the Government stand to lose. Nevertheless, it has been estimated by Dr. W. C. Mitchell that \$589,000,000 or one-fifth of the total of the nation's debt as it stood in 1865 was due to this misguided form of government financing.

(2) **Modern European Government Financing.**—During World War I nearly all the great nations of Europe, faced with the necessity of raising great sums to finance the conflict, resorted to issuing irredeemable paper money. When peace eventually came, the economic and fiscal conditions were so disturbed that the return to gold was in some cases delayed, and in others impossible. Russia and Germany, as the vast issues depreciated more and more, resorted to the temporary expedient of issuing just so much more each week or month as was necessary to meet government obligations, which were in turn increasing in size due to the very depreciation that this action was causing. Anybody coming into possession of such money was in feverish haste to pass it on before it shrank still more. Chaotic conditions and economic ruin resulted. Business became for Germans a gamble in marks. Finally, the whole vast issue in each country was in effect repudiated. It became just so much worthless paper. The other nations, Great Britain, France, Italy, etc., gradually worked back to the gold. Only in the case of Britain, however, was redemption resumed at the original face value of the notes. In France, for example, the present gold content of the franc is only a small fraction of what it was. This, of course, amounts to partial repudiation. The lesson is that fiat issues of any considerable proportion always depreciate and unless great care is taken to keep their quantity limited to some amount comparable to the anticipated gold redeeming power they will get beyond all control.⁶

The difficulties of maintaining the pre-1914 gold standard on the one hand and the danger of undesirable consequences resulting from the indiscriminate issue of paper currency on the other led some countries to adopt what is called a *managed currency system*,

⁶See also the history of the Assignats in Moulton (ed.), *Principles of Money and Banking*, pp. 144-8; also the redemption activities of the Suffolk Bank in *ibid.*

or *managed standard*. This will be discussed in connection with the subject of central banking.

Foreign Payments and Standard Money.—The question perhaps has come to the student, "But why, today, have the various nations all these sudden demands for gold?" "Why was Britain forced off the gold standard in 1931, six years after her return to it? Why did a group of other nations follow one after another, the last being the United States itself, which a short time previously was constantly being referred to as the repository of more than its share of the world's gold supply?" The answer is that the demand for gold has its origin chiefly in connection with making foreign payments.⁷

Although forces tending against the smooth operation of the gold standard were at work before 1914, the immediate causes of its breakdown are to be found in the world-wide dislocation of economic relationships resulting from World War I. The gold standard as an international monetary mechanism, generally speaking, presupposed a free flow of gold among nations to settle adverse trade balances. That is, if a country bought goods and services of greater value from abroad than it sold to other nations, it exported gold to pay the difference. If the value of a country's exports exceeded that of its imports, it received gold on balance. Thus a given country sometimes lost gold and at other times gained it. Under the scheme forces operated to check an extensive outflow or inflow of the precious metal with respect to any one country. This will be explained in the chapter on international trade. Suffice it to say here that any set of conditions which caused a prolonged one-way flow of gold would be ruinous to the system. Such conditions prevailed after World War I. The United States demanded gold in payment for war debts owed to her by European countries. Any attempt on the part of these countries to pay in goods was frustrated by high American tariffs on imports. This, in itself, put great pressure upon European gold reserves. It was a one-way traffic in the precious metal, from Europe to the United States. Other forces, for example, political unrest in Europe and relatively lower costs of production and price level in the United States, were important factors in causing the flowing tide of gold toward American shores. The gold standard mechanism could not stand the strain thus imposed upon it.

⁷An exception to this statement is the enormous withdrawal of gold and federal reserve notes in the United States during the winter of 1933 for purposes of hoarding by a public which had lost its confidence in its banks.

Problems of Money Today.—"What are the chief problems of money today, and with which functions of money are they concerned?" Taking first the medium of exchange function, are there any difficulties connected therewith? Generally speaking, so far as the use of money within the nation is concerned there are none. The problem of discovering the ideal money substance has been overcome by the use of coins of different metals bearing definite value relations prescribed by law and by the use of paper money. When it comes to the financing of international trade and services, however, the case is not so clear. Gold which for many years performed the function with fair satisfaction has failed to serve, not, however, on the ground of its becoming unacceptable anywhere, but because of the inability to keep it proportioned among the nations. The same might have happened to any substance that could have been chosen. The purchasing of war supplies through a period of years caused the balance of international payments to lie continually against Europe and in favour of America. This made for an uneven distribution of the world's gold supply. The impoverishment of large sections of the world, by war and the disorganization resulting from the conflict, combined with war debts and political manoeuvring, perpetuated unfortunate currents of gold setting steadily in certain directions. Toward the close of 1945 approximately 70 per cent of the world's supply was banked up in the United States. The other 30 per cent being spread so thin among the other nations proved inadequate to meet the strain imposed upon it. Great Britain, the nation of greatest international demand obligations, found herself short at a time when the tide set in heavily against her. Under conditions of depression first one nation and then another has found the balance of payments turning against it to the point of forcing it off the gold standard. Gold has failed because its quantity in relation to the vast payments that were to be made was insufficient. It became inadequate as an international medium of exchange. This, along with other considerations, has led to an agitation for using the two metals, gold and silver, as the accepted international medium of exchange and thus swelling the quantity. In other words, the demand is for international bimetallism. But of this more hereafter.

In the second place, what of the measure of value function? Are there serious problems connected with this? The answer again is that so far as financial relations within the nation are concerned there are none. We know exactly what a dollar is and it measures one

commodity as against another with entire satisfaction at any moment of time. But when it comes to measuring values across national boundaries, we are not so well favoured. If all nations used the same monetary unit, this would be easy. But they do not. If all nations used the same money substance as a standard, even though they put different amounts of it in their monetary units, it would be fairly satisfactory though not quite so convenient. This was the situation covering most of the trading world before 1931. But as it stands today we have drifted into a position where we have no standard substance. English prices are in pounds; American prices are in American dollars; Canadian prices are in Canadian dollars; and none of these units except the American dollar has reference to gold or to any other one substance. The Canadian who proposes to buy British goods must interpret the meaning of their prices by calculating from the day's quotation for sterling exchange. This is not impossible, of course, but it is less satisfactory than when, in gold standard days, a British price quotation meant something of itself. Furthermore, he has no means of knowing what the sterling rate will be when some days or weeks later he comes to make payment. This, however, brings us to another function of money.

Thirdly, we come to those functions of money which are concerned with time. Are there serious problems of money today connected with money as a standard of deferred payments or as a store of value? Our reply is, "Here is where much of our difficulty lies." For centuries problems have had their origin here. They have not been solved. To find a substance which will have stability of value has thus far baffled the efforts of mankind. Gold has been defended partly because of its merit in this connection as compared with other substances. But it failed ignominiously during World War I and has done so since in giving satisfaction to the nations adhering to it. In Canada the gold dollar has gone up and down in purchasing power in a way most disconcerting to those who have saved money or contracted to pay or receive money in the future. This difficulty pertains to investments and other time contracts made across national boundaries as well as those whose operation is confined to a single country. Various proposals are being put forward at the present time to overcome this difficulty. Some take the form of dismissing natural substances altogether and substituting paper money scientifically controlled as to amount; others suggest staying by the gold, but subjecting it to new forms of control; others again favour bimetallism as being likely to afford a steadier standard than gold alone.

This whole matter of the changing value of money and methods of controlling it will be considered later. We shall pause here long enough, however, to examine the history and possibilities of bimetallism inasmuch as it touches the subject of money at different points.

Bimetallism as a Standard: Its History and Possibilities.—Bimetallism is the use of two metals as standard money. This means the free or unlimited coinage of metals at stated amounts of each to the dollar (or other monetary unit). It means also that both metals shall be full legal tender. It involves the setting by law of a ratio between the two according to which one may be converted into the other at the mint. It involves too, if it is international bimetallism, the unlimited acceptability of both metals as a medium of foreign exchange.

As has been stated already, there are really three theoretical reasons for the proposal of bimetallism. One is to raise prices; the second is to ensure a more stable standard of value; the third is to provide standard money in quantity sufficient to meet the requirements of redemption of non-standard money especially as the demand rises in connection with making payments in foreign countries.

The doubtful ability of bimetallism to accomplish the first and second purposes will be discussed hereafter. Its merit as a means to the third will commend it to many. With stocks of silver added to those of gold held in reserve, it would seem less likely that nations would be forced to "abandon" their standard under financial stringency—at least as soon. The amount of standard money in the trading world would probably bear a larger ratio to the non-standard and other circulating media. Whether such a strengthening of the quantity of standard money would not, however, cause a development of almost correspondingly increased quantities of other money and credit with consequent rise in prices, thus defeating this last reason for adopting bimetallism, is a question we are not prepared to discuss at this point.

Other causes of a practical nature enter into the movement toward the two-metal standard. One that has played an important part in history has been the self-interest of the silver producers. An examination of American history, for instance, will show how much of the initiative and steady support for it came from the silver mining states of the West. The same influence is doubtless operative today. The creation of this extra use for silver would, through

strengthening its demand, raise the price of the raw material. Considering it from this angle alone, Canada's interest might well lie with that of the United States in bringing support to the move for international bimetallism, whereas Britain, France, and Germany might well oppose it.

Another argument somewhat similar in type has been advanced during the present depression by statesmen in both Canada and the United States. It is pointed out that the buying power of the Orient—which is the great repository of the world's refined silver—would be increased through the adoption of bimetallism among the Occidental nations. America's wheat and cotton proceeding through the Western gates of the continent would find their much needed new markets, and the coveted return to prosperity would follow as a matter of course. The merits and the weaknesses of the proposition should make their own appeal to the student.

Apart from the purposes sought through bimetallism, it is most important that we should become acquainted with certain mechanical difficulties of its operation. No better method can be adopted to illustrate these than an appeal to history, for, be it noted, the silver-and-gold standard is no new thing. It speaks out of the past where in its chequered career it played a part in the economic conditioning of Europe and America that was little understood by the people. We shall consult only its history as applying to the United States.

In 1792 bimetallism was adopted by Congress, the ratio between the two metals at the government mint being set at 15 to 1. Speaking precisely the American dollar meant either 371.25 grains of pure silver or 24.75 grains of pure gold. This ratio, be it understood, applied only to the dealings at the mint. The commercial prices of gold and silver were not fixed. Now market prices have a habit of running their various courses. They go up and down according to the laws of demand and supply. With the price of each varying, it was only to be expected that in the open market the ratio between them soon drifted away from the fixed ratio at the mint. With the market ratio at 15 1/2 to 1 and the mint ratio at 15 to 1, it is clear that no one would pay his debts in gold coin. He would always tender the cheaper metal. He could take his 24.75 grains of gold to the open bullion market and get more than 371.25 grains of silver by approximately 12 grains. Gold thus tended to pass out of circulation. Silver reigned supreme as standard money. Sensing the situation Congress took steps to make a place again for gold and so

re-establish bimetallism. In 1834 it changed the weight of the gold dollar to 23.22 grains thus making the mint ratio 16 to 1. But now the reverse operation began. One ounce of gold was not worth 16 of silver in the bullion market. Gold became the weaker money metal. Debtors began to tender it exclusively in payment of debts. Silver passed out of circulation. Not only silver dollars but even subsidiary silver was threatened and it became necessary to reduce their weight to keep them from being sold for their silver content.

This principle, according to which a cheaper money always tends to drive out a dearer, is known to economists as *Gresham's Law*. We see how it operated in connection with the greenbacks where it was revealed that these notes displaced the gold. We see it now again as an obstacle—apparently an insurmountable obstacle—to the operation of national bimetallism. Where both metals enjoy unlimited coinage and full legal tender privileges, it is difficult to see how one will not displace the other entirely owing to the differences developing in their market and mint ratios. That one metal may support the other in a limited way, considering the latter as the *main* standard, is not impossible. This again is illustrated in American history. Continuing our narrative, we find Congress, with silver entirely displaced, dropping it as standard money in 1873. But discovery and invention shortly after brought silver to the front in large quantities. Its price dropped. Silver miners seeking to make a market for their falling product demanded that it should be reinstated in the privilege of free coinage. Supported by the advocates of cheap money in periods of depression, they were successful in getting two acts passed through Congress, viz. the Bland-Allison Act of 1878 and the Sherman Silver Purchase Act of 1890, each of which provided for the buying of silver in considerable though not unlimited quantities by the Government, to serve as circulating coin or as reserve for extra paper printed to circulate in its stead. Under the first of these Acts the silver certificates, issued against the silver, were redeemable only in silver. They were, however, limited by the terms of silver purchase in the Act to 25,000,000 dollars per year. They were full legal tender and appear to have circulated at (or near) par. But under the Sherman Act, the Treasury notes authorized to be issued to purchase the increased quantity of silver, while having the silver placed behind them as their special support, were made redeemable in gold as well. As might have been expected under the conditions the result was bad. The Act became a device for the pumping of gold from the Treasury and as a second

step its disappearance from circulation. Treasury notes were presented for redemption in gold and the gold so obtained went out of the country or was used as a store of value at a time of national distrust. People had no desire to proffer gold in payment of domestic debts, silver being the cheaper metal.⁸ To save the nation for the gold standard it was necessary to repeal the silver purchase clauses of the Sherman Act in 1893. The expression "limping standard" has been used to characterize the monetary condition of the United States during this period when neither bimetallism nor pure monometallism reigned.

International Bimetallism.—One of the influences operating to defeat bimetallism in the United States was the adherence to gold alone by other trading nations. This condition necessitated the payment of foreign balances always in that metal. At the same time as calls were being made for gold for domestic reasons originating as we have explained above, it was frequently the case that demands were being pressed for the purposes of international payments. In fact the two demands tended to support each other. The monetary use of gold abroad tended to hold up the value of gold bullion, while the renunciation of silver as a standard money by nation after nation during the nineteenth century, tended toward the depression of its price. People, therefore, have contended that while bimetallism is impossible as a continuing standard for any one nation endeavouring to operate it alone, it is quite feasible as an internationally adopted standard. They say that silver would never have fallen as it did if its demand for monetary use had not been withdrawn; that this same withdrawal, moreover, causing an increase in the money demand for gold increased its bullion value, and thus the ratio between the two was widened through forces acting at both ends though emanating from the same circumstance.

To what degree the operation of the money demand for both metals applied on a world basis would succeed in keeping their market ratio in line with any mint ratio that might be named is a matter of conjecture. The result would depend upon a number of circumstances, the most important of which would seem to be, first, the comparative discoveries of new supplies of the two metals or of new ways of refining them, and second, the comparative size of the monetary use of both as contrasted with other uses. If the monetary demand for silver, for instance, should be only a fraction of the demand for industrial uses, it does not seem reasonable to think that

⁸For present status of these two forms, see Table xxii, p. 395.

the adoption of bimetallism, even though on a world basis, would affect its price very greatly. As a matter of fact, it is not probable that thoroughgoing international bimetallism would overcome the difficulty inherent in the device itself though it would undoubtedly postpone its collapse. A limited use of silver under some kind of international arrangement might be practicable.

CHAPTER XXIV

CREDIT AND BANKING

THE topic of this chapter is credit and banking. It has to do with the organization of short-time borrowing and lending and postponement of payment, with the provision of working capital for business. Long-term borrowing for fixed capital investment we have already alluded to. It is mainly a story of corporations and issues of stocks and bonds assisted often by investment banks whose function it is to underwrite issues of securities and place them with the investing public. Examples of such banking organizations are J. P. Morgan and Company and Otis and Company in the United States, and the Dominion Securities Corporation and Wood Gundy and Company in Canada. Commercial banks, especially the large branch banks in Canada, play a part in connection with these flotations of securities, they also carry some long-time investments of their own, but these are not their chief functions and they are not our topic here.

Then, again, there are savings banks. In the United States savings operations are carried on largely by separate institutions. In Canada, apart from government savings banks and a group of co-operative credit societies in Quebec and the Maritime Provinces, the savings bank function is performed by the large commercial banks. The government savings banks are partly under Dominion and partly under provincial (in some cases, municipal) jurisdiction.

Some of the Dominion savings banks are run in connection with the Post Office, others are allied to the Department of Finance. Both types are of dwindling importance. Ontario and Manitoba have each established savings banks organized as sub-treasury offices. Savings bank operations have a special significance since they represent, not extensions of credit by banks about which we shall read in this chapter, but the depositing of actual funds by customers. Savings bank deposits bear interest usually at $1\frac{1}{2}$ per cent, which is added twice a year, being calculated on a monthly basis using the minimum balance of the particular month as a basis of calculation. The savings bank, of course, invests the funds so

deposited in securities, etc., which necessarily must pay more than $1\frac{1}{2}$ per cent. Considered, therefore, as an economic institution, its function is to gather the funds of many savers and direct them into productive channels affording the depositor meanwhile safety for his funds and rewarding him with a low interest. In the United States, savings banks have been rather narrowly limited by law as to how they may invest these funds thus committed to their care. In Canada, no such limitations exist, the savings deposits, as a matter of fact, though separately recorded, are not kept separate from the other loaning and investment resources of the commercial banks. Savings deposits in the Canadian chartered banks amounted in 1946 to almost three and one-half billion dollars.¹

Similar in function so far as the gathering and the direction of funds are concerned are the insurance companies. We have already treated with these in connection with risk distribution but here we are concerned with them as part of the financial organization. Whether life insurance or property insurance, they gather funds through the avenue of regular premium payments from thousands of citizens and invest them where they are deemed to be safe and where they may be expected to yield good interest rates. In this way they play their part in the productive activities of the nation as well as assisting in the burden of risk carriage. Life insurance operations have increased immensely since World War I. The net coverage in Canada at the close of 1946 had reached the staggering total of \$10,812 million and the intake in premiums for the year approximated \$275 million.

Finally, there are trust companies and mortgage and loan associations. The latter loan money on real estate securing themselves by means of mortgages. Trust companies perform a number of functions. They administer the estates of deceased persons or of those living who may not wish to be bothered or have not time for detailed personal business matters. They act as financial guardians for orphans and incompetents and as custodians for trust funds. They also play a part in connection with the transfer and registration of securities, protecting the interest of both buyers and sellers. In the United States, trust companies have also extended their operations into the field of commercial banking and the banks retaliating have established trust departments. In Canada, the chartered banks are precluded by the Bank Act from functioning as trustees. The larger banks, nevertheless, are said to exercise control, each over a trust company closely allied to itself. Otherwise,

¹See Table XXI, p. 394.

trust operations are carried on largely by the mortgage and loan companies.

The activities we have been describing, with the possible exception of savings bank operations in Canada, have to do with long-time permanent investment. The purchases of investment banks, insurance companies, and loan associations are of securities representing plant and durable equipment or of real estate. The remainder of the chapter is concerned with providing temporary funds largely for working capital. It is the story of commercial credit and commercial banking.

(a) **Nature and Kinds of Credit.**—Credit is a device whereby one of the parties to an exchange is permitted to postpone the fulfilment of his part. When I buy groceries at the corner store the grocer delivers the goods for my immediate use and allows me to wait until the end of the month before paying. When I buy a car it may be on the instalment plan whereby I make a small cash payment and a number of equal payments, one every month, over a period of a year. Being in need of working capital to carry on my business I go to the bank and borrow \$500 for which I give my note promising to repay the bank in two months' time. All these are examples of credit. These various parties have extended me credit. I, apparently, am a good credit risk. Each of them is said to be my creditor. In the course of time I pay in cash or its equivalent and the credit operation thereby is concluded.

The forms of credit may be classified into kinds or types in different ways according to the point of view. For instance, it may be classified *according to the purpose* for which the loan is to be used, *or according to the source* from which it issues, or finally, *according to the instrument or evidence by which it is recorded*. For our use here we shall be content to distinguish between personal or trade credit and bank credit, and then to make some distinctions within these types.

When I buy groceries from the grocer and have them charged, my action gives rise to a simple form of personal credit. The matter rests entirely between the two of us. My debt to him is recorded in his account book or perchance is simply evidenced by the duplicate of the bill of sale handed me. When I buy my car it is also a matter of personal credit, the parties this time being the dealer and myself, but in this case there is a paper made out upon which I sign my name which obligates me to pay according to the written terms. This is called an instrument of credit. Likewise when I go to the

bank and borrow \$500, if I take it in specie it is again a matter of personal credit and the evidence of it is the note that I hand to the clerk. Suppose, however, the bank hands me for my note its own notes (allowing for the discount deducted). Each of these notes, if perused, will be seen to be a promise made by the bank to the bearer to pay specie when asked for. What has happened here, then, is really an exchange of credits. The bank has extended me credit as evidenced by its accepting my note, but I equally have extended it credit as evidenced by its promissory notes to me. In other words, it is an exchange of personal credit for bank credit. Asked why I should have approached the bank at all, why I might not as well have used my own personal notes to each of the parties from whom I sought to buy goods, the reply is that bank notes are generally acceptable in exchange while my own are unknown and inconvenient probably for small dealings. It is important to observe that my borrowing from the bank is not a sign of insolvency, rather the opposite. When I secure a loan the bank really accepts a claim on my fixed assets, which cannot be used as a means of payment, and makes them liquid, or usable in effecting exchanges.

Now the bank might have given me neither cash nor notes. It might, instead, have opened a current account in my name on its books giving me the right to check upon it as I needed the funds. Fundamentally, the situation is not thereby altered. It is still a matter of the bank transferring to me bank credit for my note. The evidence of the bank's debt to me is the entry in my pass book. The main object of commercial banks as we shall further explain is to lend or "sell" their credit and realize a profit through the transaction. Bank credit is increased every time bank notes are issued or additions made to deposit accounts.

(b) **The Instruments of Credit.**—The instruments of credit are of various kinds but they all have the common purpose of embodying a credit contract in convenient form which may be passed from hand to hand. They take the form of *promises to pay* and *orders to pay*. In the promissory note A promises to pay B a definite amount of money at a definite place after the passage of a stipulated period of time, for value received. A is called the promisor and B the payee or holder. By the process of endorsement B can make over the note to C who thereupon becomes the payee. In the processes of discounting which we are about to consider, C frequently is a bank. When B endorses the note over to C, he thereby becomes responsible for its payment (unless otherwise stipulated) in the

event of A failing to make it good to C when due. Credit in this form is more available than book credit inasmuch as it is definitely admitted through signature and can be segregated and readily become the personal possession of a new holder. Law and custom have added their influence in giving the place of preferment to credit instruments in debtor and creditor relations.

Orders to pay take various forms such as drafts, cheques, money orders, etc. The type expression is bill of exchange. When A (drawer) draws a draft on B (drawee), which calls for the payment of a definite sum of money at the expiration of a certain length of time, it becomes a contract when B accepts it, i.e. writes the word "accepted" across its face and adds his signature. (B now is known as the acceptor.) This acceptance, as it is called, is for all practical purposes the same as a promissory note and may likewise change hands through endorsement. A cheque on a bank is really a demand draft which is honoured by payment rather than acceptance.

(c) **Single-name and Double-name Paper.**—The greater part of bank credit, so far as commercial banking is concerned, develops from actual business transactions, which, by their very nature, create a demand and supply the security for short-time loans. The typical case is where the manufacturer or wholesaler ships a cargo of goods to a retailer. Let us suppose the Murray Shoe Company of London sells a shipment of shoes to Mr. X in Strathroy. It takes time for a retailer to dispose of shoes and in the meanwhile Mr. X needs his capital for other phases of his business. He expects, however, that the major portion will be sold within three months, and consequently the money intake will be sufficient by that time to take care of the shipment. He, therefore, asks the Murray Shoe Company to draw on him for the whole sum with a ninety-day draft. The Murray Shoe Company meanwhile having borne the expenses of manufacturing the shoes and having other purchases to make, does not want to tie up its capital in this way. It takes this draft, along with others of similar nature, to the Bank of Montreal and asks to have it discounted and the proceeds placed to its credit. The discount clerk at the bank consults his interest tables and makes out the discount charge, figuring it at the prevailing rate of discount calculated between present date and the day it falls due. With this deducted from the face value, an entry is made crediting the residue to the company.

This draft be it noted involves two names. Either before or after its introduction to the bank Mr. X will accept it and, by so

doing, become primarily liable for its payment when due. The bank looks first, therefore, to him, and secondly, in the event of his failure to pay it, to the drawer. This is a sample of "double-name paper." Instead of handling it this way the Murray Shoe Company might have sold on book account, or, drawing a draft, might have retained it themselves and borrowed from the bank for their own needs through the use of a straight promissory note to the bank. This would be a "single-name paper." Yet again, if their own credit was not sufficiently strong they might use their own note, as in the last instance, but deposit this and similar drafts or perhaps certain bonds or other securities that they had in their possession as a pledge for the payment of the loan. The note would then be said to be collaterally secured and whatever bonds, drafts, etc., were so turned over to the bank would be called "collateral." In Canada, generally speaking, double-name paper is most popular with the banks. Chief reliance, however, is usually placed upon the drawer in transactions of this nature, regard, nevertheless, being had for the fact that actual goods are involved anticipating a money turnover.

Typical Operations of a Commercial Bank.—It has frequently been stated that the chief functions of a commercial bank are those of loaning or discounting, deposit creating, and note issue. So far as Canada is concerned this is true but in the United States it is not so universally correct. The banks there that operate under state charter as contrasted with those that hold their charters from the federal Government, do not issue notes in their own name.

Loans and Discounts.—We come now to an explanation of these terms and will attempt to make clear just how the bank serves the business public. We have seen how credit instruments—promissory notes, drafts, and acceptances—arise in connection with business deals. Let us suppose that the Kellogg Company of London has made a shipment of corn-flakes to X and Company, retail grocers of Sarnia, to the extent of \$1,000. Let us suppose that X and Company, rather than pay cash for the shipment, have requested that Kellogg's give them two months' time to make payment. In the meantime they expect to sell the goods to the public and out of the money received they expect to meet their obligation. This extension of credit will enable them to use their own capital for other purposes of their business during the two months rather than have it tied up in these goods. Consequently, it is agreed that the Kellogg Company shall draw a draft upon them according to these

terms. The draft will be dated from time of shipment and will be worded somewhat as follows:

\$1000

London, Ont., January 2, 1948.

Two months after date pay to the order of—

The Kellogg Company of Canada, Ltd. (or to their bank)

One thousand ————— 00/100 dollars

Value received.

To—X and Company
Sarnia.

Kellogg Company of Canada, Ltd.
per—

Now it may be that Kellogg's are not making a full use of their funds. It may be their policy to keep their business in a condition of self-sufficiency so that they can extend credit to such of their customers as ask for it and still have funds to meet their own obligations. More frequently, however, our manufacturing firms are in the habit of extending operations to the point where their capital resources will not meet the double requirement. We shall assume that Kellogg and Company are of this type. It is their policy to extend credit to their customers but they in turn look to the bank to furnish credit to them. They accordingly enter the draft on the Sarnia firm for discount, let us say ten days after it is drawn. Strictly speaking this draft as yet involves no enforceable contract between the drawer and the drawee and if the bank were in any way doubtful of Kellogg and Company's ability to cover the amount, it would refuse to discount it until X and Company had accepted it. The chances are, however, that the London bank is relying chiefly on the name of the Kellogg Company, and on its belief in the *bona fide* nature of the business deal between the two firms rather than upon the reputation of the other company in a distant city. We may assume, therefore, that the bank will discount the draft immediately and give the Kellogg Company the desired credit. The draft itself after being entered in the ledger for discounted bills will be forwarded to the Sarnia branch of the bank, presented there to X and Company for acceptance and there held until its date for maturity, when presumably it will be paid.

We are interested for the moment, however, in what has happened in London at the date of discounting and in the relations between the bank and the Kellogg Company. We find that through this one item there is illustrated two and perhaps all three of the essential functions of commercial banking. Suppose we assume that Kelloggs have handed in the draft simply asking that the proceeds be placed to the credit of their account. The discount clerk would

thereupon make up the discount, calculating it between the date of the entry of the draft at the bank and its due date, and deduct it from the amount of the draft. This represents the profit to the bank on the transaction. The remainder would be placed to the credit of the Kellogg Company to be checked at will. As seen from the angle of the bank, the bank's resources have increased by \$1,000 in the form of a claim upon X and Company for cash at the end of fifty days and, in the event of its failing to pay, the claim rests upon the drawer. The evidence of this asset is the draft itself. On the other hand, the bank has assumed a liability to honour cheques drawn by Kellogg and Company to the tune of \$990.02, assuming the discount rate to be 7 per cent. In other words, it has given its own credit for a somewhat larger amount of business credit. It has made a profit of \$9.98 in the transaction. Translated into accounting terms the bank's statement is affected as follows:

Assets	Liabilities
Loans and discounts..... +\$1,000	Deposits..... +\$990.02
	Undivided profits..... +\$ 9.98

As seen from the angle of the Kellogg Company the firm has exchanged a time claim against a customer for the right to draw at will upon a bank and has paid the latter something for the more convenient form of credit. It has furthermore freed for other purposes the capital locked up as it was through this extension of credit to its customer.

Note Issue.—The example we have given illustrates the manner in which the bank performs its discount and deposit functions. We shall need to vary the transaction in some respects to explain the function of note issue. Let us suppose that Kellogg and Company, when entering the draft for discount, had requested that \$100 of the proceeds should be paid to them in money and that the remainder should be placed to their credit. Now so far as the Kellogg people are concerned it will probably make little difference what money is paid them so long as it is in convenient denominations. It will not concern them whether it consist of Bank of Canada notes or notes of this bank, or of some other bank. The bank, on the other hand, is in business for itself and its chief business is that of selling its own credit. Consequently it will pay out its own notes as far as possible. Hence when the transaction is completed, all three banking functions will have been performed. The changes in the bank's statement would appear as follows:

Assets		Liabilities	
Loans and discounts.....	+\$1,000	Deposits.....	+\$890.02
		Notes.....	+\$100.00
		Undivided profits.....	+\$ 9.98

If there is any question as to why notes are shown as a liability, let the student examine the statement on the face of a bank note. Plainly it is a promise of the bank to pay the bearer a definite amount of cash. To him as a holder the bank note is an asset even as your deposit in the bank is an asset, but from the bank's standpoint both are liabilities. When a bank issues notes it increases its liability to the public; when it receives them back over its counters it reduces its liability.

To illustrate further the typical operations of a commercial bank, whereby deposits, loans, and note issues are developed and contracted, let us follow the course of this same draft through to maturity. Let us assume that on March 5, the representative of X and Company presents himself at the Sarnia bank and announces his intention of taking care of his obligation. He offers, however, not full payment in currency but part in the form of a new draft drawn as was the original except that the date is March 5, and the period is thirty days. Let us assume that his whole means of payment is as follows: renewal draft—\$400; notes—of this bank—\$200; notes of other banks—\$100; Bank of Canada notes—\$50; and the remainder with a cheque on his own account in this bank. The effect on the bank's conditions would be as follows:

Assets		Liabilities	
Loans and discounts.....	-\$600.00	Notes.....	-\$200.00
Cash.....	+\$ 50.00	Deposits.....	-\$252.53
Cash items.....	+\$100.00	Undivided profits.....	+\$ 2.53

Through the retirement of this draft the bank's business will have decreased \$450. Its demand liability will have decreased \$452.53. It will have made \$2.53 profit through discounting the new draft. The \$100 taken in in the form of notes of other banks will be held as "cash items" until tomorrow morning only, when they will go home to the various banks which have issued them and their amounts will be credited to this bank. Operations like the above are typical of the activities of commercial banks. They serve to illustrate an important phase of the process by which a banking system extends credit.

It is necessary to remark before passing to the next topic that all bank loans do not arise just in the manner described here.

Neither do bank deposits. Some loans are consumption loans. A professional man, say, buys a property and needs to resort to bank borrowing from time to time in connection with making his payments. His bank will probably advance him credit up to the extent of a few hundred dollars on his own name, and will do even more if he has good securities to offer as collateral. This is not to be construed to mean, however, that commercial banks make loans against real estate as security, for that they may not do.

Some firms, as we have pointed out elsewhere, make a practice of borrowing on direct note. In this case though, the actual business dealing is in the background, and the turnover of products with attending cash returns is involved even though the two-name paper is not brought to the bank. In the main, bank credit, it should be understood, has its own background in actual trading relations.

As for bank deposits built on bases other than those described, there are continually passing over the counters into the keeping of the banks various items of currency, cheques on other banks which customers of this bank have received and wish placed to their credit, daily cash coming to retail firms and individuals, etc. Proceeds of drafts collected for clients by the bank are frequently added. Such deposits placed thus simply for safekeeping or convenience do not, however, directly increase the circulating medium as in the case of credit being extended through loans and discounts. They merely substitute one form for another.

Minor Functions of Commercial Banks.—The chief functions of commercial banks are those of discount, deposit, and note issue. This, however, does not exhaust the list. Commercial banks also perform a useful service in taking notes and drafts for collection simply, without advancing proceeds to customers. In the case of drafts the bank's service usually includes procuring acceptance by the party upon whom the draft is drawn. With much of this paper so received the drawees or the makers live in distant places, which means that it must be sent forward to the branches or correspondents of the bank in those places to be held there until due. For this service the bank collects a small charge or commission. Similarly, cheques on distant places (as well as local cheques on other banks) are taken for collection. With cheques, however, provided the bearer can furnish satisfactory identification or guarantee, the custom is to cash them in advance.

Other functions are the sale of bank drafts, money orders, and letters of credit, the supplying of advice to clients about the merits

or demerits of persons or firms whom they may be considering as business risks, and finally the provision of safety deposit boxes for the guarding of valuable papers, money, etc. for their customers. With their services in connection with the issue of securities and with savings operations we have already dealt.

An Exhibit.—As a means of bringing out some of the points we have been setting forth, as well as illustrating some others that are to follow, we offer here a condensed general statement of one of our banks at the close of its year. The close relationship between the chief demand liabilities, notes and deposits on the one hand, and the main loan accounts on the asset side on the other is clouded by the fact that savings deposits are lumped in with commercial deposits. Nevertheless the prominence of these items on opposing sides of the balance sheet in some measure bears out our argument. The large asset "government and other public securities" is to be explained partly in terms of the business depression, war financing, and the inability of our banks to find what they consider legitimate business ventures upon which to bestow their credit, partly it is a matter of policy of Canadian banks to keep a part of their resources in the form of first-class securities as a kind of secondary reserve. The largest single factor accounting for the size of this item was the buying of Dominion government bonds to help finance World War II. At the end of 1938, public securities held by this particular bank amounted to less than \$114 million. As shown by Table XXIII, this account had increased to over \$267 million by October, 1947. The difference, \$153 million, is almost wholly the results of the bank's purchases of Dominion government securities. The item "Reserve Fund" which is here coupled with undivided profits as a major part of the bank's liabilities to its stockholders, and which we frequently see in gilded letters on bank windows, may be misleading. It represents what is usually called in the language of corporate accounting "surplus account," being built up from the profits of previous years and the sale of bank shares at a premium. This must not be confused with reserves in the sense of ready cash. Notes of, and deposits with, the Bank of Canada constitute the banks' legal reserves. These are included in the item "Cash." The total under heading "Cash, Clearings and due from Banks" (extremely liquid assets amounting to \$125.6 million) is almost 20 per cent of the bank's combined deposits and notes in circulation (\$642.4 million).

TABLE XXIII

THE BANK OF NOVA SCOTIA

(Condensed General Statement as at October 31, 1947)

LIABILITIES	ASSETS
Notes in circulation...\$ 1,726,765. 67	Cash, clearings and
Deposits..... 640,683,536. 81	due from banks.... \$125,565,290. 47
Acceptances and letters	Government and other
of credit outstanding 32,526,669. 12	public securities, not
Other liabilities..... 884,385. 88	exceeding market
Total liabilities to the	value..... 267,202,339. 98
public..... \$675,821,357. 48	Other bonds and stocks,
Capital..... 12,000,000. 00	not exceeding
Reserve fund..... 24,000,000. 00	market value..... 22,586,958. 29
Undivided profits..... 2,623,321. 68	Call loans (secured)... 19,325,019. 07
	Total quick assets... \$434,679,607. 81
	Other loans and dis-
	counts (after full
	provision for ban and
	doubtful debts.... 238,537,823. 29
	Liabilities of customers
	under acceptances
	and letters of credit
	(as per contra).... 32,526,669. 12
	Bank premises..... 6,234,038. 82
	Shares of and loans to
	controlled companies 1,459,984. 55
	Other assets..... 1,006,556. 07
<u>\$714,444,679. 16</u>	<u>\$714,444,679. 16</u>

The Question of Reserves.—With demand liabilities running to many times the amount of the cash assets, it is quite apparent that if all these claims were presented against the bank at one time, it would be quite unequal to the task of honouring them. Other assets it has, of course, but they are not immediately available. The bank premises could not be quickly sold except at a great sacrifice. Commercial loans, the largest single item, cannot be turned to cash until they fall due and their maturities range all the way from one day to months. Government call loans and cheques on other banks are better still. The statement, in fact, shows this bank to stand in an unusually good liquid position. Nevertheless, the point remains

that its immediate assets are far short of its demand liabilities. How can it feel safe to carry on in this way? How are we to explain its claim to the confidence of those who entrust it with their deposits? The answer is that experience shows that not all claims are presented at one time, and that out of a total volume of deposits only a small fraction will be drawn in one day. The fraction has been found to vary between different communities according to the habits of the people, their experience in using banks, their industrial condition, etc. The turnover of deposits is generally much more rapid in urban and commercial centres than in agricultural areas. The picture we get is that of a comparatively small amount of specie and legal tender going and coming in any one day, even in comparison with the amount of business being transacted during that day, let alone as contrasted with the whole demand liability of the bank. When customers draw cheques the bank normally honours them with its own notes, and consequently it suffers no loss of cash. Furthermore, while some demand does arise for payments in cash from customers checking out their accounts, a daily supply is coming in at the hands of others who are paying their maturing acceptances, and of retail merchants and salaried people who come into possession of it in their various walks of life.

Nevertheless "runs" do occur against banks and frequently we hear of their having to "close their doors." Once a rumour gets around that a bank is hard-pressed, its depositors are likely to press upon it for payment in cash. Its notes will not be acceptable. Its position may be ever so sound, provided it may have time to realize on its loans, but it may through panicky action of its depositors be forced to suspend payment unless it has large resources in cash.

Most countries, therefore, name by law a definite minimum percentage of deposit liability that shall always be held in specie, central bank notes, or in recent times, central bank deposits. Likewise a percentage that shall be held against bank notes outstanding. This as we shall see is true of both the United States and Canada.² The reason for such laws is that it is feared that the lure of profits will cause banks to build up their obligations in relation to their cash beyond the point of security. For the greater the amount of credit structure that can be raised on a given cash basis the larger will be the profit to the bank's stockholders. The two purposes, security and profit, are at odds.

²Prior to 1935 Canada left this entirely to the discretion of the banks, now a legal reserve against deposit liabilities is required.

All banks do keep reserves whether compelled to do so or not. How much they should keep will depend on a number of circumstances, such as the degree of liquidity of their other assets, the education and conditioning of their clientele, the possibility of ready approach to other institutions—central banks or governments—for assistance.

The "Creation" of Bank Credit.—Considerable controversy has arisen over the question of credit creation by banks. Monetary cranks and reformers are loud in their denunciation of the bankers on the grounds that they have enriched themselves with interest charges on the lending of credit which has been "created by a stroke of the pen." Bankers, on the other hand, vociferously deny that any such manufacturing of credit takes place. They point out that all commercial loans have been granted at the request of borrowers and are secured by assets turned over to the banks by the persons and institutions to which the loans were advanced. If this exchange of credit results in augmented demand deposits, the responsibility rests with the public and not with the banks. Furthermore, bankers assert very emphatically that they are the custodians of their depositors' money and from the viewpoint of safety dare not lend funds in excess of the amounts deposited with them by the public. In other words, a bank's source of loanable funds is the deposits placed with it by its customers, plus the comparatively small sum provided as capital by shareholders. Therefore, there can be no credit creation. Between these conflicting points of view the layman is confused, not to say bewildered—so, in many cases, are the reformers and bankers.

From our consideration of a commercial bank's operations, it appears as though a bank does actually create credit when a loan is made. We have seen how a thousand dollar loan might result in a deposit of approximately the same amount. This transaction was effected by opposite entries in the books of the bank. Furthermore, a typical bank statement shows that loans and deposits are roughly eight to ten times larger than cash reserves. How is this possible if there is no credit creation, that is, if the bank lends only the money deposited with it by the public? Surely the banker has a difficult task in substantiating his argument. But has the reformer established his case? Is the banker absolutely wrong in asserting that the chief source of loanable funds is deposits? Let us examine the situation further.

Credit Creation by an Individual Bank.—There are at least two good reasons why an individual bank in our competitive economic order cannot create credit in the popular sense. In the first place, banking would be so profitable that intense competition in this field would result. If it were possible for a single bank to take \$1 in cash and on that base lend \$10 in credit at 6 per cent interest, all of us would get into the banking business as soon as possible. While the authors are not aware of any bankers being on relief, yet members of the banking fraternity have not amassed huge fortunes in the manner which their extreme critics would have us believe.

The second reason why an individual bank cannot create credit is that it dare not expand credit at a more rapid rate than other banks in the system. To do so would involve such a bank in clearing house difficulties. The clearing house is an institution wherein the claims of individual banks against one another (i.e., notes and cheques) are offset daily and the balances settled in cash, or, what amounts to the same thing, by cheques on deposits which banks keep for that purpose in the clearing house. This arrangement greatly economizes the use of cash. The principle involved is illustrated roughly by the following table:

TABLE XXIV
CLEARING HOUSE OPERATIONS, JULY 3, 1939

	Claims			Total claims by	Total claims against	Balance due to (+) and by (-)
By bank	Against bank					
A	\$.....	\$10,000	\$23,000	\$33,000	\$29,000	+\$4,000
B	22,000	8,000	30,000	34,000	- 4,000
C	7,000	24,000	31,000	31,000

A study of Table xxiv shows that Bank A has a credit balance of \$4,000 and Bank B a debit of an equal amount at the clearing house. In our hypothetical case, the claims of and against Bank C exactly offset each other. It should be noted that \$94,000 of business was transacted with an actual transfer of only \$4,000. On the following day the situation might be radically changed with B entitled to receive a balance and both A and C obliged to make good a deficit. Clearing house transactions are merely a larger appli-

cation of the principle followed within a single bank when cheques drawn on and deposited to the credit of a given account are offset. A commercial bank is a clearing agent for the community. The clearing house acts in the same capacity for the banks. The result is great economy in the use of money.

It is evident that any one bank could not expand credit more rapidly than the other members of the system, otherwise it would lose its cash reserve through the clearing house, to the other banks. If all banks expanded in step there would be no such danger owing to the offsetting process. But there is no assurance that all banks in the system will increase their loans and deposits *at the same rate*. Collusion among bankers in this regard is extremely rare, if not entirely unknown. In its own interests an individual bank must not get out of line with the other members of the system. If it expands credit more rapidly than the rest it loses cash; if less rapidly, it gains cash. No bank wants to run the risk of having a depleted reserve. On the other hand, an excess of cash is unprofitable. In order to avoid these difficulties a bank, generally speaking, aims to lend out approximately what it takes in. Deposits must precede loans. Therefore it does not create credit.³

But we have not yet interpreted the phenomenon of the balance sheet. At the same time we are not prepared to accept the popular explanation of the bankers. They have failed to show why it is that, if a bank does not lend more than it receives in deposits, loans and deposits are far in excess of cash holdings. Were not the first deposits (i.e., those in the early stages of the bank's development) made in cash? If so, how have they expanded eight to ten times the amount of the original—except through the creation of credit? Surely here is a mystery that calls for solution. The explanation is to be found in the functioning of a banking system.

Credit Creation by a System of Banks.⁴—A banking system can multiply loans and deposits far in excess of its cash holdings, despite the fact that the amount lent by any one bank may be no greater than the sum of previously acquired deposits. Let us suppose by way of illustration that all banks adhere strictly to a 10 per cent reserve ratio and that just before the process about to be explained takes place, all are loaned up to the limit of this ratio so there can

³The exceptions need not be considered here. In the main the amount of credit creation by an individual bank is small unless it is the only bank in the community.

⁴For a detailed explanation, see C. A. Phillips, *Bank Credit* (New York, 1921), chap. III.

be no inter-bank borrowing. Let us further assume that under these conditions someone places \$1,000 cash in one bank, Bank A, thus the bank's deposits and reserves have been increased by \$1,000. For reasons already explained it cannot immediately lend \$10,000 on the basis of this new \$1,000 addition to reserves. If the bank did so there would be creation of credit on its part and resultant clearing house difficulties. It can, however, hold a 10 per cent cash reserve (\$100) against the recently acquired deposit and make a new loan of \$900 which is equal to the difference between the cash received and the amount held as reserve (\$1,000-\$100). In other words, the bank lends only its excess reserve. After such a loan has been made, part or all of the proceeds will overflow into other banks and constitute new deposits to them. They held 10 per cent of the incoming funds as reserve and lend the remaining 90 per cent as did Bank A. In this way, i.e. through repeated use of the same funds, the system can do with safety what an individual member bank dare not attempt, namely, expand loans and deposits greatly in excess of the amount of cash acquired. Bank credit creation is a system phenomenon. The following table will illustrate the process:

TABLE XXV
CREDIT EXPANSION BY A SYSTEM OF BANKS

Bank	Deposits	Reserves	Loans
Bank A.....	\$1,000	\$100	\$900
Bank B.....	900	90	810
Bank C.....	810	81	729
Bank D.....	729	72.90	656.10
.....
.....
.....
.....
Bank X.....	.....	.....	.....
Total at end of process	\$10,000	\$1,000	\$9,000

Table xxv shows what happens when one bank in a system receives a new \$1,000 cash deposit. Bank A keeps 10 per cent (\$100) as reserve and lends its surplus cash (\$900). After the borrower had checked against the proceeds and the cheques so issued were cashed, the effect (disregarding bank interest) on Bank A's balance sheet would be as follows:

Loans.....	+\$900	Deposits.....	+\$1,000
Reserve.....	+\$100		

If all of the \$900 after withdrawal from Bank A were deposited in Bank B, as indicated in Table xxv, the latter would set aside 10 per cent (\$90) against this deposit (or deposits) and lend the remainder, namely \$810. Through clearing operations this might find its way into Bank C, which institution would follow the same procedure as regards reserves and loans. Thus a part of new \$1,000 cash deposited in Bank A will overflow from bank to bank.⁵ When the entire original \$1,000 is diffused throughout the banking system, deposits would amount to \$10,000 and loans \$9,000. From a study of this process it is apparent that, while an individual bank cannot lend more than its excess reserve, a system of banks can use this reserve on a basis for a several-fold (depending on the reserve ratio) expansions of loans and deposits.

One should not overlook the fact that this expansion of deposits augments the amount of circulating media. Even if it is true that bank credit is exchanged for personal credit, the important point is that *bank credit extension increases the means of payment*—i.e. the money supply in the broad sense, whereas personal credit has, from a practical viewpoint, no such effect. As a rule no other institution except the government performs this function. Furthermore, bank money, as we have seen, is greater in amount than that issued by the government. In so far as the quantity of money in a country affects price levels and business conditions, the banks possess extraordinary economic power and should assume corresponding responsibility. This is a lesson which bankers have been slow to learn.

Principles of Central Banking.—The picture of banking operations would not be complete were we to fail to give some attention to the activities of central banks as these function in relation to the rest of the credit structure in most of the leading industrial countries. Great Britain, France, Germany, the United States, and Canada have each placed the leadership in credit policy in the hands of a central national bank, functioning in more or less close relationship with government. The leading principle of central banking is the setting up of a banker's bank which shall stand to the other banks of the country in a relation somewhat similar to that in which these stand to the individuals and firms who are their customers.

⁵Part of the original \$1,000 would tend to flow back to Bank A and thus enable it to make additional loans, but the fundamental process is the same. If it were the only bank in the community practically all such funds would return and the bank would function as a system. This is the chief exception to the statement that "an individual bank cannot create credit." A bank with branches would operate as a system within its own organization.

More particularly, in the matter of credit, their purpose is to extend credit to banks during periods when the resources of these become unequal to meeting the legitimate needs of their clients and through this means to bring additional strength as well as an element of elasticity into the credit possibilities of the country. Furthermore, through using the device of a changing discount rate, they seek to make their loans to other banks more profitable in periods when it is believed the business life of the nation requires stimulating and less profitable at times when it seems to be overexpanded. By this means (and in other ways which will be dealt with later) they seek to give leadership to the other banks and to control the expansion of credit in accordance with the best interests of the nation. In line with this main idea of maintaining an effective control over credit, central banks are usually given a monopoly on the right to issue bank notes in so far at least as these involve a fiduciary element. In keeping also with the idea of making the most economical use of the specie reserves of the nation, these are concentrated in the vaults of the central banks to serve as a basis for notes and deposits alike, instead of being scattered about among the various banks of the country. Finally, in addition to their relations with other banks, they perform important services for the governments, acting as their fiscal agents, carrying their funds on deposit, administering the public debts, and assisting with their financial transactions. It is with their function of amplifying and controlling, however, that we are chiefly concerned.

The American Banking System: (a) Substratum: The Basis in Independent Local Banks.—We shall explain central banking in greater detail by presenting the Federal Reserve System of the United States, but first it will be necessary to outline briefly the banking arrangements in that country before the passage of the Federal Reserve Act.

The unit of banking in the United States is the independent local bank operating under charter sometimes from the federal, sometimes from the state governments. The number of these runs into thousands. State chartered banking dates back to the emergence of states from colonial status. National banking goes back only to 1862 and the passage of the National Bank Act, the double object of which was to provide a better currency for the nation and to stimulate the sale of government securities to provide funds for the carrying on of the war against the seceding South. From the Civil War, therefore, down to 1913, the country has had two sets of banks,

each type running under its own legislative restrictions and rules, the state banks, moreover, differing largely in those matters among themselves according to which state's jurisdiction they happened to operate under. A similar situation holds still since the passage of the Federal Reserve Act. Over three quarters of the country's banking is done by banks which are members of the Federal Reserve System and which come under its regulations. The other quarter, and constituting numerically more than half the total, operate under state charter and are susceptible only to indirect control by the federal reserve authorities.

Under the National Bank Act the National Banks were, in effect, given a monopoly of note issue, and legal provision was made with regard to the security of these notes and also with respect to minimum reserves that the banks might keep for deposits. The notes were required to be secured to their full face value by federal government bonds as well as by 5 per cent in gold. Gold reserves behind deposits were not allowed to drop below 25 per cent in the larger cities nor below 15 per cent in the smaller cities and towns. Certain stipulations were made as to where these reserves might be kept, the purpose of which was to keep a large portion—roughly half of the total—in each bank's own vaults, while allowing the rest to seek investment in the central money markets and thus earn some interest for their owners. The chief weaknesses of the National Banking System were found through experience to be the following:

(1) The notes, while secure enough, were inelastic and uneconomical of the bank's resources. Every hundred dollars' worth issued involved the use of \$105 of cash, more or less depending on the current price of bonds. When bonds were commanding a high price there was a tendency to retire the notes. When they were low the tendency was to expand notes. Circulation, therefore, tended to contract and expand in accordance with the price of government bonds rather than in accord with the needs of business.

(2) The rigid deposit reserve requirements likewise resulted in inelasticity of credit permitting no further expansion when the limit had been reached.

(3) The stipulations regarding reserves, combined with the fact that the various banks were independent, resulted in a great lack of co-ordination and an uneconomical use of the nation's gold.

(4) The reserves that were permitted by law to leave the home vaults tended to pile up largely in New York, and when general conditions made it desirable to call home these invested reserves,

as happened from time to time, the New York banks were sadly put to it to make an adequate response.

To find a remedy for these difficulties, and some others, much study and investigation were made over a period of years. Fact-finding commissions consisting of bankers and economists toured Europe. The Canadian system was studied. The result was the passage of the Federal Reserve Act of 1913. This brought about radical changes in existing arrangements for nationally chartered banks and superimposed a system of semi-public banker's banks upon the organizations already standing. A new elastic currency was provided, a new less rigid system of reserves against deposits instituted, and a much needed co-ordination has been effected through well-planned inter-relations and a centralized control. The next reading presents the Federal Reserve system in more detail.

(b) **Superstructure: The Federal Reserve Banks.**—The Federal Reserve Act has been declared by some Americans to be one of the most important pieces of legislation passed in a century. It gave to the country elastic and adequate credit, it economized in the use of gold resources, it distributed the monetary facilities more equitably among the different areas, and provided the people with improved banking services in other respects.

Outstanding in the machinery created under the Act are the Federal Reserve Banks and the Federal Reserve Board.⁶ As contrasted with Britain and European countries which operate one central bank, the American legislators saw fit to divide the country up into twelve districts and to place a Federal Reserve Bank in the city which stood as the economic centre for that area. The aim was to decentralize banking resources in a country of wide areas and diversified interests. New York, it was believed, had become, to a great degree, the resting place of the nation's reserves. A single unit central bank would, perhaps, serve to intensify this condition. To the Democratic party in particular, whose members came largely from the South and West, it seemed desirable to decentralize both reserves and policy making. Just how far this purpose has been fulfilled is a matter of question. New York still remains the chief financial centre for the nation. Funds still flow to it for convenient investment following the established channels from all parts of the country. This takes place, however, in spite of, rather than by means of, the Federal Reserve banking arrangements. Through

⁶Reconstituted by the terms of the Banking Act of 1935 under the name *Board of Governors*.

them, titles in the form of gold certificates, to part of the gold resources must be held in all the Federal Reserve banks and the amount which must be held in any one of them will depend, as we shall see, upon the quantity of business it is called upon to do for its district.⁷ Be this as it may, the American arrangements for central banking are complex as contrasted with European simplicity and have given rise to knotty questions about defining the powers of control as between the different parts. More than one Federal Reserve Bank has challenged or defied important orders emanating from the Federal Reserve Board (now called the Board of Governors). It will be well to remind ourselves that such difficulties are not inherent in central banking but rather, if at all, in these plural arrangements.

The Federal Reserve Banks should not be thought of as mere financial appendages of government. Neither should they be looked upon as private institutions doing business with the public and organized for profit making. The Federal Reserve Banks do not stand alone as a banking system. They do business, for the most part, with member banks which, in turn, trade with the public and which also must be considered as a part of the Federal Reserve Banking System. The Federal Reserve Banks are owned by the member banks. By the terms of the Act, all nationally chartered banks were required to become members and to subscribe to the stock of the Federal Reserve Banks in their respective districts to the extent of 6 per cent of their capital. State banks and trust companies were invited to become members upon similar terms but the Government lacked the constitutional powers to force such action upon them. According to the terms of the Banking Act of 1935, state banks having average deposits of \$1,000,000 or more in 1941 must become members of the Federal Reserve System by July, 1942, or lose the right to have deposit insurance.

While the Federal Reserve Banks are privately owned, it must not be thought that the chief motive in their policy-making is profit to stockholders. To guard against this, it is provided (1) that returns beyond 6 per cent shall not be paid as dividends but shall go to the Government; (2) that the directors shall be chosen according to certain definite prescriptions. These are that, of the nine directors of each bank, three, known as class C directors, shall be chosen

⁷In accordance with the monetary legislation of 1934, the Federal Reserve Banks surrendered their gold holdings to the Federal Treasury and received gold certificates in exchange.

by the Board of Governors and one of the three, the Federal Reserve Agent, shall sit there as the agent of the Board of Governors. Of the other six, while they all shall be appointed by the member banks, only three shall be bankers representing the bankers as stockholders. The others shall represent the business interests of the district and shall be chosen from the ranks of industry, commerce, and agriculture. While the selection of the chief executive officers, the president and vice-president, of each Federal Reserve Bank, is made by the Board of Directors of the bank, the choice must be approved by the Board of Governors. Finally, (3) the policies and activities of the twelve banks are expected to conform to the recommendations coming from the Board of Governors, which is wholly a government-appointed body.

The Board of Governors.—The Board of Governors of the Federal Reserve System consists of seven members appointed by the President of the United States with the advice and consent of the Senate. They serve for a term of fourteen years. The chairman and vice-chairman of the Board are designated by the President for a four-year period. In general, the Board's function is to co-ordinate the system. It supervises the Federal Reserve Banks and through its control over them attempts to influence the policy and operations of the whole structure of member banks. Specifically, the Board makes and enforces rules determining the character of assets that may be acquired by the Reserve Banks, approves and assists in fixing the discount rates to be charged on Reserve Bank loans in any district, supervises the issue of Federal Reserve Notes, compels the Federal Reserve Banks to comply with the reserve stipulations, changes member-bank reserve requirements, and helps to determine open-market policies.

In performing the last-mentioned function, the Board is assisted by the Open-Market Committee. This is composed of the seven members of the Board of Governors and five other persons holding office for one year who represent and are chosen by the Federal Reserve Banks. In this committee is vested complete power for determining the policy of security buying or selling in the open market by any or all of the Federal Reserve Banks. Another body known as the Federal Advisory Council has the right to consult with, and make suggestions to, the Board of Governors regarding matters of policy. It consists of twelve members, one selected by the Board of Directors of each Federal Reserve Bank. A Federal

Open Market Committee of seven members advises the Board as to the buying and selling of securities by the Federal Reserve Banks.

This sketch of the powers, ownership, responsibilities, and methods of appointing officers of the Federal Reserve System will enable the student to form some opinion as to how far the credit organization of the country is under public influence and control.

Relations between Member Banks and Federal Reserve Banks.

—What is the relation of the Federal Reserve Banks to the member banks of their districts? The answer to this is that they function both to assist and to control. This will be best understood through explaining the practice of rediscounting. In the course of its daily business, we have seen that a commercial bank comes into possession of quantities of bills of exchange and promissory notes, credit instruments representing payment-claims in the future, and that these normally constitute the greatest asset of the bank. We have also noted that banks find it necessary to keep cash resources against their demand deposit liabilities and that in the United States the law requires this cash never to drop below some minimum percentage. Under the Federal Reserve Act, the percentage named for the member banks varies according to the type of city in which they are located. For banks in New York and Chicago the figure is 13 per cent. For second string cities it is 10 per cent. For banks in small cities, towns, and villages it is only 7 per cent.* (Incidentally, they are not allowed to retain these reserves in their vaults but must keep them in the form of deposits with the Federal Reserve Bank. Such cash as they need for hour-to-hour operations they must needs keep in addition.) Now let us suppose Bank X in Detroit has been blessed with a developing range of enterprising customers and functioning as a member in the banking system has built up discounts and deposits until its cash reserves are just 10 per cent of deposits. Detroit being a city of the second class, the bank can support its customers no further, standing by itself. No matter what their need or how legitimate their business ventures, the case is the same. The bank can do nothing for them. Its limit of credit extension has been reached. This was the outstanding trouble prior to 1913. After a period of prosperity, banks generally were wont to find themselves in this position. Business enterprises had nowhere to turn for help. But it is just here where the Federal Reserve Act has wrought a great change. Today Bank X does not stand alone. For it is permitted to select a portion of these credit

*Time deposit reserve requirement for all banks is 3 per cent.

instruments that it holds as assets and after endorsing them, present them at the Federal Reserve Bank at Cleveland (or Chicago) for rediscount. The process of rediscounting is similar in principle to discounting in the first instance. A rate is charged which normally stands about 1 per cent below the rate that Bank X has charged to his customers. The Federal Reserve Bank now possesses the rediscounted paper as its asset while Bank X receives credit to the amount of the proceeds. An interesting feature is that this credit is allowed to count as additional reserve for the member bank just as if it had deposited so much gold. The point is very important since it means that the possibilities of credit expansion are greatly enhanced. By presenting \$100,000 worth of paper the bank would thereby increase its reserve by nearly that figure and, when this sum became diffused as reserve throughout the banking system, the credit extension on this base would amount to approximately \$1,000,000. What, then, the reader is likely to ask, is the limit to expansion? And where—with commercial paper serving to increase reserve—is there left any relation between credit extended and gold minimum, taking the country as a whole? The answer is found in several additional provisions of the Act, but chiefly in one, viz. the requirement that the Federal Reserve Banks themselves must keep a reserve of 25 per cent in the form of gold certificates (claims to gold) against the deposits which they have credited to the member banks. In other words, the Federal Reserve Banks are compelled to hold the equivalent of a 25 per cent gold reserve against the reserves of the member banks. *This 25 per cent reserve requirement is the ultimate check upon credit expansion.* In the last analysis, the maintenance of gold reserve for the financial structure of the nation becomes thus a responsibility of the Federal Reserve Banks; although, since the monetary legislation of 1934, the Federal Treasury is in a position to affect credit and gold policy to a considerable degree.

To bring out another way in which Federal Reserve Banks assist member banks, let us assume that the customers of Bank X were calling for paper money rather than for deposit credit. In this case the same action could be taken by the bank as before. Instead of having the proceeds used as reserve for deposit liability, it will use it to procure Federal Reserve Notes which will be handed to it to the full amount of the proceeds. Against these notes which, when issued, become a demand liability of the Federal Reserve Bank, the latter must keep 25 per cent in gold certificates. Furthermore,

there is here no multiple expansion of credit as in the case when Bank X took the proceeds of rediscounting in the form of a deposit (extra reserve) in the Federal Reserve Bank.

Economizing Gold Resources through the Central Bank.—It will be appreciated from the above that a given amount of gold can be made to support a larger amount of credit when a country has a central banking system. Prior to the passage of the Federal Reserve Act, the banks operated independently with no compulsory arrangements for mutual assistance. Each bank was responsible for the maintenance of its own specie reserve and the country deemed it necessary that the ratio to credit extended should never be low. The minimum legal requirements for the three classes of cities were practically double the 13, 10, and 7 per cent requirements that are named today. Moreover, as a whole, they had to be kept in specie. There was no possibility of substituting deposits, based largely on commercial paper, in a central bank for any part of them. Contrast with this the implications of the reasoning we have been following above. Through the rediscounting operation of the Detroit Bank, the banking system was enabled to extend new credit amounting to \$1,000,000 against the \$100,000 commercial paper that was taken to the Federal Reserve Bank. It was called upon for no additional gold. The only responsibility for increased gold resources as a result of \$1,000,000 increase in bank credit would be the 25 per cent requirement of the Federal Reserve Bank against its new liability, and amounting to approximately \$25,000 or 2.5 per cent of the new credit extended to the member banks' customers.

The use of Federal Reserve Notes, while they involve a 75 per cent fiduciary element, is nevertheless, as already indicated, much less economical of the gold resources than is credit built up through deposits. Federal Reserve Notes, however, have much to commend them as a form of bank note. They expand in volume rather naturally with expanding enterprise as they have a basis in commercial paper. In so far as they are not covered with specie they must be covered by such paper. Likewise, they contract rather naturally as the rediscounted paper is retired by the member banks. Lest there should be any doubt about their general acceptability, they were made a direct responsibility of the Federal Government.

Devices Making for Still Further Expansibility.—We have pointed out how, through lowering the gold requirements and centralizing the location of gold within the Federal Reserve Banks,

and also through the process of rediscounting, the Federal Reserve Act has made possible a great increase in credit expansion upon the basis of a given amount of gold. The whole story, however, has not yet been told. It introduced still other emergency devices intended to serve the same purpose. For, if through continued rediscounting any one of the Federal Reserve Banks reaches its 25 per cent reserve limit, it may appeal to the Board of Governors and that body will order one of the system banks which still has a margin of gold certificates above its legal needs to rediscount appropriate assets of the needy bank. By this means all legitimate business in any part of the nation can be encouraged so long as there is a margin of gold claims in any of the twelve banks. Secondly, assuming that the limit has been reached everywhere and no Federal Reserve Bank is capable of assisting further, then the Federal Reserve Board may permit the suspension for a time of the 25 per cent requirement. When this is done, however, a tax is laid on the excess deposits raised upon the basis of such rediscounting, the point being that while the arrangement may tide over an emergency the extra cost will cause such credit to contract rather quickly.

Control over Member Banks and, Therefore, over Credit Conditions.—An excess of bank credit tends to stimulate a rise in prices (or at least permits such a rise) and an undesirable boom in economic activity, whereas a deficiency has a depressing effect upon prices and production. Since the amount of bank credit outstanding thus influences business conditions, the Federal Reserve Banks, institutions working in the public interest, are intrusted with the function and responsibility of credit control. By what means is such control exercised? We shall now attempt to answer this question.

Broadly speaking, the officials of the Federal Reserve System seek to exert an influence upon the amount of bank credit outstanding in four ways. The first is known as the method of *moral suasion*. Officers of the Federal Reserve Banks advise, by direct conference or otherwise, directors of the member banks to curtail or expand credit as the case may be. Moral suasion is not a very powerful instrument of credit control.

The second method consists in *manipulating the rediscount rate*. Raising the rate discourages the borrowing of additional reserves by member banks. On the other hand, lowering the rate encourages member banks to borrow from the Federal Reserve Banks and lend to the public at attractive interest charges, which are, of course,

somewhat higher than the rediscount rate. It is evident that at a time when the member banks have excess reserves an increase in the rediscount rate will not have a restraining effect upon the quantity of bank credit extended by member banks—except in so far as the latter follow the leadership of the central banking authorities and regard the higher rediscount rate as a sign that credit should be restricted and act accordingly. Otherwise, the raising of the rediscount rate has no restricting influence—unless the member banks are forced to borrow additional reserves from the Federal Reserve Banks.

This leads us to a consideration of the means employed to compel recourse to the Federal Reserve Banks, namely, *open market operations*, that is, the buying and selling of securities in the open market by the Federal Reserve Banks. This is the third method of control. If the reserve officials wish to decrease bank credit, they sell securities. Purchasers pay for them by cheques drawn on deposits in the member banks. The amount of cheques so drawn is deducted from the reserves of the member banks. The latter must now make a proportional reduction in their loans (and, hence, deposits payable to the public) or borrow from the Federal Reserve Banks. The rediscount rate then becomes effective. Buying securities in the open market has the opposite result, member bank reserves are increased and they are encouraged to lend more freely to their customers.

The fourth instrument of credit policy, *changing the reserve requirements of the member banks*, is under the jurisdiction of the Board of Governors. This body, upon the vote of at least four of its members, can increase the legally required reserves of member banks 100 per cent but cannot decrease them below the old stipulations of 13, 10, and 7 per cent.⁹ The right to increase the reserve ratios has been exercised on several occasions. This is a very powerful restricting weapon. By way of illustration, assuming a reserve of 10 per cent against demand deposits, if the member banks have a reserve of \$1,000,000,000, they can build up a superstructure of deposit credit amounting to \$10,000,000,000. But if the Board of Governors raised the requirement to 20 per cent, bank credit would have to be reduced to \$5,000,000,000.¹⁰

⁹Time deposit reserves may be raised from 3 per cent to 6 per cent.

¹⁰On Dec. 31, 1947, reserves were 20, 20, 14 per cent (demand) and 6 per cent (time).

From our discussion of the relations between Federal Reserve Banks and member banks, it will be seen that the methods of credit control, apart from moral suasion, exert an influence over the amount of bank credit outstanding through their effect on the size of member bank reserves. Rediscount rate manipulation and open market operations have an indirect effect, whereas that of changing the reserve requirements is direct.

Assistance to, and Control Over, Other Parts of the Financial System.—A quarter of the banking of the country is still carried on by banks outside the Federal Reserve System. Furthermore, there are important factors in the financial organization not comprehended in the category of commercial banks. Something must be done to aid and control these elements if a central system is to be truly effective. The founders of the Federal Reserve System were quite alive to the importance of these parts. They sought to reach them through what have been called "open market" transactions. The open market is the organization through which commercial paper of first-class type from all parts of the nation is freely bought and sold. Firms of the Middle West, lacking perhaps adequate banking facilities, strike contact with ready funds from New England through offering their paper here. The Federal Reserve Act sought to stimulate this line of trading, especially as it related to foreign trade, through making it possible for banks to accept drafts drawn on them by their business clients, and thus providing a new and acceptable form of paper for such a market. The open market centres on New York and comprehends, in its articles of trade, certain short-term government securities and foreign bills of exchange as well as domestic commercial paper and bank acceptances.

Federal Reserve Banks operate in this market by "loosening" or "tightening" money as the needs of the time seem to indicate. When it is believed that business is over-expanding due to easy credit and abundant money, the Federal Reserve Banks at the same time as they increase rediscount rates to member banks sell blocks of their securities and paper in the open market, and thus tighten the market through absorbing the money. When enterprise appears in need of stimulating, at the same time as they lower the rate to the member banks they enter the market as buyers. An incidental effect of these alternating activities is that upon the direction of the international stream of money. In the former case foreign money is attracted; in the latter money now in the country tends to seek better interest returns elsewhere.

The open market, furthermore, furnishes a medium through which Federal Reserve Banks can assist non-member banks either to increase their reserves or to make a fuller use of their funds when local enterprise offers them insufficient opportunity. For banks in the condition first named, while they may not rediscount their paper, they are free to aid them through purchasing it. To the last named they help to provide a choice of investments when there is a dearth of possibilities in the market.

Canadian Banking: General Statement.—While fundamental banking operations are similar in the two countries, the Canadian Banking System differs widely in structure and co-ordinating machinery from the American system. Briefly stated, Canada has, in place of thousands of independent unit banks, a few large banks, each of which is in itself considerable of a system, involving as it does a head office and hundreds of branches. Beginning with 1935, Canada has had a central bank of rediscount corresponding in many respects to the semi-public banks of Europe and the United States.¹¹

In Canada today a government-owned and controlled central bank functions as the chief repository of reserves and as the agency primarily responsible for promoting health and balance in the financial service of the nation. As in the United States, positive requirements are laid upon the commercial banks for the maintenance of reserves of standard money against deposits to be kept with the Bank of Canada. Likewise, the law stipulates the minimum reserves that may be kept by the central bank itself.

Branch Banking.—Co-ordination of banking resources and operations we have found was only attained in the United States with the legislation of 1913. Canada had long since achieved this result to her own satisfaction by travelling quite a different road. With

¹¹Before that, possessing no authoritative government-appointed board to look after the public interest, Canada, as a partial substitute for these, required her banks to maintain certain stated relations with the Dominion Department of Finance and to undergo inspection from time to time by government inspectors. The direct and positive control by Government was comparatively slight. No legal requirements were laid down with respect to reserves for deposits comparable to those in the United States, and relatively little was required for notes, the most important restriction, as we shall see, taking the form of keeping the amount of notes that were not covered by dollar for dollar gold limited in accordance with capitalization. Finally, it should be added that Canadian bankers have this in common with American bankers that they use the New York loan and investment market as a place to invest funds which, perchance, they may want to call suddenly to meet emergencies, or, in any case, in order to avoid too complete a dependence upon the home situation.

her it was not a matter of passing laws to force independent unit banks to support each other through establishing certain relations with an overhead system. It was rather a natural growth of the original banking organizations spreading themselves out across the continent by means of branches and carrying equal banking services to every town and practically every important village, thus providing ideal co-ordination within the range of each organization. Canada has known no lack of banking facilities in any section, nor high interest rates in one part while low rates and difficulty of investment pertained elsewhere. It is true that rates on the prairies have, at times, ranged 2 per cent or, in places, even 3 per cent higher than in the East, but this, it is claimed, has been due to the nature of the loans rather than to any failure of the banks to provide funds. Under a system of branch banks, funds are ideally liquid so far as geographical barriers are concerned. Savings are collected in the Maritime Provinces and Ontario and Quebec and placed at the disposal of enterprisers in Manitoba and Alberta with the greatest ease. Incidentally, it should be remembered that Canada has no system of independent savings banks and this fact lends strength to the capacity of the commercial banks to gather funds and distribute them at those points where they can earn the largest returns. It is said the time deposits of the Canadian banks under normal conditions amount to two and a half times the demand deposits.¹² Critics of the system maintain that this easy flow of funds is not calculated to serve the best interest of all sections. The claim is that the older parts of the country not being able to employ capital to yield 8 or more per cent is unduly deprived of funds, which, under other conditions, would remain near home and supply local enterprise at lower rates. Be that as it may, the fact remains that no disparity of interest rates has existed in different parts of Canada comparable to that existing between New England and the Western States in days prior to 1913. And comparison even since the passage of the Federal Reserve Act shows how the American system has failed to bring credit resources to the Dakotas equal to those afforded by the Canadian banks to borrowers in Saskatchewan and Manitoba.

Not only does the branch banking system afford equalization of interest rates, it also brings equal banking service to all parts. The citizen of the small hamlet in some remote part of the country has the entire service of a great organization with its connections in practically all parts of the world brought directly to him. Often-

¹²See Table XXI, p. 394.

times branches are opened in new sections years before they can be expected to pay expenses of upkeep. In this way the great banks may be said to have had a part in the pioneer development of the country. Local independent banks could never have risen to play this part. Here, again, however, the critic has come forward with his comment. If the large organizations have opened and maintained branches years before they were capable of meeting costs, it could only have been done at the expense of the other branches which must perforce have charged higher interest on loans or paid a lower rate on savings.

The branch bank again lends itself readily to the collection of cheques and drafts on other places. Every head office is, in effect, a clearing house for items moving among the branches. Mutual arrangements exist too between different banks by which the far-flung branches of each are, for this purpose, placed at the disposal of the other in all places where the latter may not have branches of its own.

Again, a given amount of cash reserve will go farther in supporting demand obligations under a branch system than under a unit system. This follows not only from the great diversity of loans and investments of a branch bank, but also, as has been explained in connection with the Federal Reserve System, from the possibilities of centralized control and the ability to throw large amounts of reserve quickly to any point of need.

Finally, the branch banking system lends itself ideally to providing the country with an elastic system of bank notes. Each bank is an agency of expansion and also of contraction of notes. In its own interest it seeks continually to pay out its own notes over its counters and for the same reason it seeks to reduce those of its competitors, sending them home through the clearing house as fast as it receives them in the course of regular business. This is, of course, not the whole story of elasticity of bank currency, but it is an important phase of it.

The Head Office.—The general trend of this discussion has doubtless suggested to the student the strategic position of the head office in any of our large banks. Located at the centre of things, receiving regular reports of conditions at each branch, determining credit policy and circularizing the branches regarding that policy for the coming period, sending out special instructions on various matters to particular branches, keeping track of the personnel of the whole organization and ordering certain employees to proceed from

this branch office to that, supervising the work of all the branches through a staff of inspectors, watching the proportion of reserves to obligations and reporting the bank's condition to the Government, serving as clearing house among the various branches, making investments for the bank and passing judgment on the larger loans reported by the branch managers—this list will give some idea of the dimensions of its task and the great responsibility entering upon it. Like the Federal Reserve Banks, the head offices of Canadian banks do no direct banking business with the public. But, unlike the reserve banks, they have no affiliations with Government through methods of appointment of officers or avowed public responsibility. Their responsibility is purely to the bank's own shareholders. In fact, the leading official guiding the affairs at head office is the general manager of the bank. The head office is simply the administration centre of the bank *as a corporation*.

Before dismissing this matter of the means by which co-ordination is affected in Canadian banking, it is pertinent to remark that what we have been talking of has been largely co-operation among the branches of any one bank rather than co-ordination among all the banks in the country. The latter came only with the creation of the central bank. Apart from it, Canada has ten great banks, all Dominion-chartered and standing as separate corporations in competition for the country's patronage. Although this competition seems refined largely to an emulation in service rather than a cutting of rates, it nevertheless is real. Until 1935 there was little of a compulsory nature tying their resources together as in the United States. That the depositors in the Bank of Toronto were in any way protected by the reserves of rival institutions was probably not true. Yet there were some features which caused them to strengthen each other in some degree. Certain provisions about to be mentioned did cause them to stand together in the security of notes. It is an historical fact, moreover, that few weakening banks have been allowed to fail in Canada. At the instigation of the Minister of Finance, failure is usually forestalled by an amalgamation with one of the stronger banks. The majority of our banks as we find them today have achieved their vast proportions largely through this method of growth.

Commercial Bank Notes.—From an historical viewpoint the note issue of commercial banks in Canada has played an important role in the development and functioning of the country's economy. Before 1935 chartered (commercial) bank notes along with those

issued by the Dominion government made up the paper money of the country. Under this system each commercial bank was entitled to issue notes up to the amount of its paid-up capitalization. These notes were not backed by any specific reserve, for example, gold. They constituted a prior claim on the bank's general resources. That is, the commercial bank notes were an asset secured currency. Provision was made for the issuing of notes beyond the amount of paid-up capitalization by allowing the banks to deposit dollar for dollar in gold or Dominion notes with the Minister of Finance. By legislation passed in 1923, the banks were permitted to deposit approved securities with the Minister of Finance and thus secure an extra quantity of Dominion notes against which they could issue an additional amount of their own notes. This was the familiar rediscounting procedure. These provisions gave a measure of elasticity to the circulating medium.

With the founding of the central bank in 1935 this picture was changed. Not only were the Dominion Government issues replaced by Bank of Canada notes, but there also began the gradual displacement of commercial bank notes. According to the Bank Act as amended in 1934 (the Bank Act stipulates rules and regulations regarding incorporation and operation of chartered banks; it is revised every ten years), chartered banks were required to reduce their note issue gradually during the years 1935-45. At the end of this period the amount in circulation could not exceed 25 per cent of the banks' paid-up capitalization on March 11, 1935. The Bank Act revision of 1944 further restricted the commercial banks' note issuing privileges. It provided that the banks may not issue or reissue notes after January 1, 1945, and that the circulation be completely withdrawn by January 1, 1950.¹³ This legislation, giving the central bank a monopoly of note issue, is in conformity with modern banking theory and practice.

Deposits.—Before the advent of the central bank, Canada left the matter of maintaining security for deposits entirely to the banks themselves. No legal stipulations regarding reserves were laid down. In practice, however, reserves of Canadian banks did take on certain well-defined traditional forms. A fair margin of specie and Dominion notes, amounting, normally, to 10 per cent of net liabilities, was kept on hand. Certain cash balances were maintained outside Canada at all times, principally in the United

¹³The chartered banks may issue notes for circulation outside Canada, but the amount must not exceed 10 per cent of their paid-up capital.

States and England. More important in amount was the so-called "call money" loaned in New York and London (largely in New York). At the close of 1928, this amounted to more than a quarter of a billion dollars. But at the end of 1946, call money abroad totalled only \$77 million. Finally, the banks kept an increasing amount of funds invested in readily marketable securities, consisting chiefly of government, municipal, and railway bonds.

In time of crisis it has been the policy of Canadian banks to support their customers at home, drawing in their call money from abroad and disposing of some of their securities. The strength of the system was tied up with New York and the bond market. The Federal Reserve Act, doubtless, brought indirect support to the Canadian banks even as it did to those of the United States.

Legal Reserve Requirements.—While much of the pre-1935 picture regarding Canadian banking practice is still true, the coming of the central bank led to a new set of relations between bank deposits and reserves. The revised Bank Act called for a legal reserve of 5 per cent of the bank's deposit liabilities (demand, savings, and government) within Canada. This reserve must be in the form of either a deposit with the central bank or Bank of Canada notes. The Bank of Canada Act provided for rediscounting facilities. But the commercial banks as yet have not resorted to borrowing from the central bank in order to augment their reserves. The new legislation stipulated that the Bank of Canada must keep a 25 per cent gold reserve or its equivalent against its total demand liabilities (notes and deposits) in Canada. As Canada was not on the gold standard when the central bank commenced operations in 1935, or since that date, the gold reserve requirement clause has never been effective. With the transfer, in 1940, of the Bank of Canada's gold holdings to the Foreign Exchange Control Board, the relation between gold and the amount of bank credit in the country virtually ceased to exist.

Loans.—With respect to loans, as with deposits, the Canadian banks suffer few legal restrictions. They are left comparatively free to determine how they shall put out their funds. The most important exception is the provision forbidding loans upon the security of land and, generally speaking, other immovable property, although they are permitted to accept real estate mortgages as additional security for loans previously made. The typical form of lending is the commercial loan maturing in three months or less. In theory the means of payment should materialize during the term of the

loan. In other words, the loan should be "self-liquidating." Hence the limitations with respect to the form of security legally acceptable to the banks.

"Intermediate" Credit.—While the ordinary short-term loan meets the current needs of industry and trade, it is inadequate for agricultural purposes. Here longer-term credit accommodation is essential. For years the chartered banks were criticized for their failure to provide loans suited to the farmers' requirements. Steps were taken to remedy this situation in the Bank Act revision of 1944. Now the banks are enabled to provide "intermediate" credit (i.e. for a period in excess of three months) to farmers and fishermen. The proceeds of such loans are to be used to finance the purchasing of agricultural implements and certain forms of immobile farm equipment (e.g. an electric system). Similar provisions are made to enable fishermen to secure the facilities they need. The scheme is designed to increase productive efficiency with respect to both farming and fishing, and to raise the standard of living in non-urban areas. On these "intermediate" loans the banks charge 5 per cent simple interest. The Dominion government provides a guarantee against loss by the banks up to 10 per cent of the aggregate of such loans.

Relations with Government.—In several ways the Dominion Government exercises what might be called a permissive influence over the banks. In the first place, it controls the issue of charters, each one of which calls for a special Act of Parliament and must be renewed every ten years. By statute no bank can begin operations on a capitalization of less than half a million dollars, a fact which, doubtless, has protected the public from experimentation in banking by the unqualified, but which likewise may have deprived the public of the benefits of competition to the older established organizations. Secondly, the Government requires of the banks monthly statements of condition forwarded to the Minister of Finance. Thirdly, since 1924, an Inspector-General of Banks, an appointee of the federal Government, has had it for his duty to inspect the head office and principal branches of each bank and to examine the reports sent in from branch managers and the bank's own inspectors. Should he find a bank threatened with insolvency, he is to report it to the Minister of Finance who may order a curator appointed to examine its affairs without waiting for its own admission of insolvency. Furthermore, in the fourth place, Government may exert either a positive or a negative influence in the matter of bank amal-

gamations. No amalgamation may take place without the consent of the Governor-General-in-Council acting on the recommendation of the Finance Minister and the Receiver-General. Contrariwise, the Finance Minister has acted on occasions behind the scenes to rescue a floundering bank through having a stronger one take it over.

Finally, the Minister of Finance announced in February, 1946, an agreement with the banks which restricts their holdings of Dominion Government securities "other than short securities. . ." to a fixed proportion of their savings deposits. As both commercial and savings banking have been carried on by our chartered banks, there was not, until recently, any clear-cut policy as to the type of security behind each class of deposit. If satisfactory commercial loans were not available, the banks used their loanable funds to buy long-term government securities. This tendency was not confined to Canadian commercial banks; it was general throughout the western world, particularly during the great depression. The new arrangement provides that the banks' holdings of Dominion Government bonds will not average more than 90 per cent of the amount of their savings deposits in Canada. This places the savings banking functions in precisely the same position they would occupy if performed by separate savings institutions.

The Bank of Canada: Historical Sketch.—In 1934 "An Act to incorporate the Bank of Canada" provided for the establishment of a Canadian central bank. This institution, with a capitalization of \$5,000,000, commenced business on March 11, 1935. Originally it was privately owned, but control was divided between its shareholders and the Dominion Government. Provision was made for the election of seven directors by the former whereas the latter appointed the bank's chief executive officers. Partly as a result of opposition to a privately owned central bank, the Bank of Canada Act was amended in 1936. By this legislation the capitalization of the bank was raised to \$10,100,000 through the sale of \$5,100,000 Class B shares to the Minister of Finance. The original shares were designated Class A. This change gave the Government a plurality of voting rights and afforded a means whereby it would eventually elect a majority of the directors. A further amendment was passed in 1938 which lowered the capitalization to the original amount of \$5,000,000 divided into 100,000 shares, all of which are held by the Government. The shares formerly issued were retired through the purchase at a premium of Class A stock from the holders and the

exchange of Class B for the new issue. In this way the Bank of Canada was brought under complete government ownership and control.

Organization and Management.—The head office of the Bank of Canada is located at Ottawa. It also maintains an agency in the chief financial centre of each province.

Under the terms of its present constitution, the bank's chief executive officer is the Governor, who acts as Chairman of the Board of Directors. He is assisted by a Deputy Governor and an Assistant Deputy Governor. The original appointments were made by the Government. Subsequent selections are to be made by the Board of Directors subject to the approval of the Governor-in-Council of Canada. The term of office is seven years, except in the case of the Assistant Deputy Governor, which is five.

The Board of Directors consists of the Governor, Deputy Governor, and eleven other members. The last-mentioned are appointed for three years by the Governor-in-Council. Each member has one vote. The Board meets at least four times a year. Nominally, it is the policy-determining organ of the bank, but actually this function is performed by the Governor assisted by the Executive Committee of the Board of Directors.

The Executive Committee includes the Governor, Deputy Governor, and one other member of the Board. The Committee meets weekly and has the same powers as the Board but every decision is submitted to the latter for approval at its next meeting. The Deputy Minister of Finance is an *ex-officio* member of the Board of Directors and of the Executive Committee but is without a vote.

Functions.—The Bank of Canada, as previously indicated, performs the usual functions of a central bank, most of which were described in connection with the Federal Reserve System. It acts as the Government's fiscal agent, holds the specie reserves of the country, will eventually have a practical monopoly of note issue, and provides the legal reserves for the chartered (member) banks. Against its demand liabilities (notes and deposits) in Canada the bank must keep a 25 per cent gold reserve.¹⁴ Any reserves above the legal minimum may include silver bullion, sterling, and United States dollars, also the currencies of other countries which are on a gold standard and balances in the Bank for International Settlements. An unusual feature of the system authorizes the bank to make direct advances for a period not exceeding six months to the

¹⁴This requirement has never been effective.

commercial banks, Quebec Savings Banks, and to the Dominion or provincial Governments. The role played by the Bank of Canada in this country's financial system can be appreciated by a study of the bank's annual statement, a copy of which (for the years 1938 and 1947) is presented in Table XXVI.

It should be noted that the bank holds a large portfolio of government securities. This indicates that it is adhering to the semi-inflationary policy inaugurated by the Department of Finance before the bank was established. The bank, however, has been hampered in its credit control activities owing to the lack of an extensive and well-organized "open market" for securities in Canada. It is now helping to develop such a market by large-scale dealing in short-term government securities. Rediscounting has been virtually absent because the commercial banks have had ample reserves since the early thirties. The rediscount rate has remained unchanged at $2\frac{1}{2}$ per cent until 1944 when it was reduced to $1\frac{1}{2}$ per cent. Effective credit control by the Bank of Canada is not yet a reality. But this is no indication that it will not become an established fact in the future.

"Managed Money".—The growth of commercial banking and the development of central bank control over the volume of purchasing power in the hands of the public has led to a system of "managed money." The improvement of commercial banking technique economized the use of gold. Bank credit displaced gold and other forms of "cash" as a medium of exchange. Gold was concentrated in bank reserves. The advent of the central bank accentuated this tendency. The mechanism and practice of credit control (altering the rediscount rate, open market operations, etc.) have resulted in an ever looser relation between the amount of gold in the banking system and the volume of purchasing power (bank credit) in the hands of the public.¹⁵

Canada, notwithstanding the relatively weak position of the central bank, has a "managed money" system. Table XXVII, which sets forth the volume of money and related bank assets in Canada, shows how the means of payment has changed in size (in this case expanded) between 1935 and 1946 without specific relation to the amount of gold in the Bank of Canada. It is true that the Foreign Exchange Control Board held a considerable quantity of

¹⁵The role and responsibility of the government in maintaining a steady flow of purchasing power into the hands of the public will be considered under "Full Employment" and "Public Finance."

gold after 1940 (see footnote to Table XXVII), but it was not used as a basis for the credit structure of the Canadian banking system. This is no cause for alarm. It is the inevitable result of the perfection of banking technique.

TABLE XXVII
VOLUME OF MONEY AND RELATED BANK ASSETS IN CANADA*
(Millions of dollars)

	1935	1939	1943	1946
VOLUME OF MONEY				
Bank of Canada notes held by the public.....	59	162	752	1,009
Chartered bank notes held by the public.....	111	85	42	21
Total notes held by the public.....	170	247	794	1,030
Public demand deposits with chartered banks .	641	853	1,697	2,291
Public notice deposits with chartered banks...	1,486	1,741	1,948	3,469
Volume of money held by the public.....	2,297	2,841	4,439	6,790
Dominion government and other deposits with chartered banks.....	82	256	711	535
Dominion government and other deposits with Bank of Canada.....	19	65	52	175
Total Volume of Money.....	2,398	3,162	5,202	7,500
RELATED BANK ASSETS				
Bank of Canada:				
Gold†.....	181	226	....	....
Foreign exchange†.....	4	64	1	....
Securities.....	114	232	1,260	1,921
Chartered banks:				
Victory Bonds held <i>re</i> public purchases on official instalment plans.....	....	....	72	....
Other dominion and provincial securities....	956	1,353	2,555	3,634
Other securities.....	153	221	135	323
Loans <i>re</i> public purchases of Victory or Canada Savings Bonds at time of issue.....	....	....	189	98
Other Canadian loans.....	1,028	1,141	1,015	1,545
Total.....	2,436	3,237	5,227	7,521

*Source: Bank of Canada, *Annual Report to Minister of Finance*, 1946. (Data presented in 1947 Report are not comparable.)

†In May, 1940, under the Exchange Fund Order and the Foreign Exchange Acquisition Order, the Bank of Canada sold gold and exchange amounting to \$253.5 millions to the Foreign Exchange Central Board and acquired additional government securities.

Industrial Development Bank.—The latest type of credit extending organization to be established in Canada is the Industrial Development Bank. This institution, incorporated in 1944 with a capitalization of \$25 million, is a subsidiary of the Bank of Canada, but functions as a separate entity. Its purpose is, "ensuring the availability of credit to industrial enterprises which may reasonably be expected to prove successful if a high level of national income and employment is maintained, by supplementing the activities of other lenders and by providing capital assistance to industry with particular consideration to the financing problems of small enterprises."¹⁶ It will be observed that this bank is to supplement rather than compete with other credit-granting institutions. Furthermore, it must lend to industry only, with special reference to small enterprises. As a rule, the loans are payable in instalments over a period up to five years.¹⁷ But the bank has power to (and does) extend credit accommodation for a longer period. As of September 30, 1947, the loans authorized by the Industrial Development Bank totalled \$19,758,037. Of this amount \$13,329,995 was outstanding.¹⁸

Banking as a Phase of Production.—Let us summarize briefly. We have discussed the nature of credit; we have found that the commercial bank is merely a device for the promotion and refinement of short-time credit (recently also intermediate), that it achieves this purpose through the discounting of credit instruments and the building of deposit and liabilities, that the process is more effectively carried through in most countries through the use of central banks, but in Canada a somewhat similar co-ordination is effected through the branch banking system which in turn maintains banking relationships with the Bank of Canada.

The reader is now invited to ask himself what is the ultimate purpose of all this structure of credit with its various refined forms. He will find, when he comes to think it over, that the purpose of commercial credit and the whole banking organization is mainly to make possible and to facilitate modern productive enterprise. The test of the effectiveness of our banking institutions is whether or not our industries produce satisfactorily and steadily. If factories are idle and goods are not moving in trade, the banker as controller of

¹⁶Preamble to Act of Incorporation.

¹⁷See S. R. Noble, "Industrial Development Bank" (*Canadian Banker*, vol. LII, 1945, p. 42).

¹⁸Industrial Development Bank. *Annual Report to the Minister of Finance*, 1947, p. 9.

credit is to be held in some measure responsible. In fact, in view of the strategic position that the banker holds, we are justified in laying a large measure of the condemnation at his door. For the banker has the power to decide to whom and to what type of enterprise bank credit shall be extended and, for this reason, it is his to choose what forms production can take. But not only is it his to distribute credit but more than this he can control in a very large measure the total amount of credit that shall be made available at any one time. We have seen how this is accomplished, especially by central banks through raising and lowering the discount rate, but quite apart from the activities of these it is inherent in the very nature of banking that liquid credit is in the keeping of the banker. Modern economists have come to recognize the dire consequences to production of what they call an over-expansion of credit, as well as the unhappy conditions engendered through a failure of business interests to obtain credit enough. The responsibility of gauging its flow and keeping it right rests with the banker.

CHAPTER XXV

PRICE LEVELS AND STABILIZATION

INTRODUCTORY.—Price levels are related to the value of one commodity, money. It will be readily apparent that we cannot speak of the price of money.¹ Price, the reader will recall, means value in terms of money, and it would be meaningless to value a thing in terms of itself. We return, therefore, to the more general concept value. Value is the power of any commodity to command other commodities in exchange, i.e. its general purchasing power. This is precisely what we mean when we speak of the value of money, its purchasing power over all other goods and services.

The concept of a price level will be seen to be simply the obverse of that of the value of money, and consequently the two move in opposite directions. When the price level rises the value of money falls. This matter of changing price levels is one of vast importance to all classes of society albeit little understood by most people. It is a subject that is claiming a great amount of attention from economists at the present time. Suggestions of various kinds are also forthcoming to control the whole matter, i.e. to stabilize the purchasing power of the dollar. Some of these are presented in the closing pages of this chapter.

Significance of Changing Price Levels.—When the average person places his money in the bank he is concerned with two things, viz. first, the mental assurance that the bank will be able to pay it back when he wants it and, second, the rate of interest that the bank is offering. It rarely enters his mind that the hundred dollars that he draws out is different in value from the hundred he put in, say, two years earlier. Yet such is in fact the case. Suppose, for example, Mr. X had deposited \$100 in the Bank of Toronto one day in the early spring of 1913 and had left it there for seven years, taking satisfaction in the thought that it was compounding interest. At the same date in 1920, suppose he drew the whole sum out and found that it totalled no less than \$122.88. So far, so good! The figures

¹Such an expression is used, it is true, but it refers to the use of money for a limited time only.

show an increase of approximately 23 per cent. But when he came to spend his money he found it would not go very far. In fact, if his memory served him sufficiently well to make comparisons, he would have found that his whole \$122.88, principal and interest together, would not buy as much as the principal alone would have in 1913. Butter, eggs, beefsteak, clothing, furniture, all had risen in price tremendously in the meantime. Some of them had more than doubled. Careful calculations made by our statisticians covering that period reveal that the general buying power of our money in 1920 was less than half what it was in 1913. All people who saved in the pre-war period and loaned their money at any normal rate of interest, even though their investments were ever so sound, lost in reality all their interest and a considerable part of their principal through this shrinkage of the dollar, or, otherwise expressed, this rise in the price level.

Suppose, on the other hand, that Mr. Y borrowed on this same date in 1913, \$5,000 secured by a mortgage on his house and suppose that he decided to pay it off in 1920. In the meantime, prices generally have been rising. The profits of Mr. Y's business, although perhaps not actually much greater, are, in terms of dollars, more than double what they were in 1913. Among other commodities the house itself has increased greatly in its money valuation. The \$5,000 appears a small sum as contrasted with the increased figures that Mr. Y has come to think in. To pay the \$5,000 is no great task. In other words, Mr. Y has gained greatly through the increase in price levels.

Coming forward to the early thirties, we find both these experiences reversed. Those who borrowed money in 1928 or during the years immediately preceding were having a most difficult task to make payments. The sums, although nominally the same as before, had become vast in relation to the low money earnings of the later period. Those who saved and placed their money in secure keeping were, on the other hand, the favoured ones. The interest that they were drawing commanded far more goods and services than it did in 1928 and their principal, should they have seen fit to draw it, represented a great advance in buying power.

We are now in a position to make some general statements about the effect of changing price levels upon different groups and classes in the community and perhaps in some small degree to evaluate the phenomenon as a whole. In the main, the money lending classes gain through falling prices and lose through rising prices. This

statement must be made, however, subject to qualification. Falling prices tend to put a damper upon business operations. The demand for loans tends to fall off with the result that interest rates become lower. Consequently, what the capitalist may be gaining through an increase in the value of his principal he may find himself losing in interest income. Furthermore, during times of depression, so frequently connected with, or following, rapidly falling price levels, the man with money at interest has his trouble in making collections.

The entrepreneur flourishes in periods of rising prices. As one with large property in capital wealth, both fixed capital and goods in process, he stands to gain with the advance in value of these. More vital from the standpoint of current income will be the effect of the upswing on the price of his finished product. If he is a borrower of funds, this fact again tends to multiply his opportunity at such a time. A limitation upon his advantage, however, is found in the fact that his costs—raw material, wages, interest, taxes, light—also rise. These, however, with the exception perhaps of the first named, generally lag behind the rise in his prices. Indications of the gains to the entrepreneur through rising prices are found in the rapid rise in the prices of common stocks and the flourishing condition of farmers at such times. The banker as a toll-taker in entrepreneurial ventures also profits by rising prices. Governments, to the degree that they operate under debts, gain through rising and lose through falling prices. This fact stood out in clear relief from the viewpoint of the 1930 depression. Not only did war debts become impossible through their disproportion to the earning power of the debtor nations, but countries and municipalities were pushed to the breaking point with their regular public obligations.

Retail merchants, though coming within the entrepreneur class, deserve especial mention. Statistical studies show that retail prices do not move through as wide price swings as wholesale. This means that as a whole they do not go up so fast nor down as fast. This would seem to limit the possibility of the large entrepreneurial gains to them during rising price periods and by the same token to work to their advantage during falling periods.

The position of the wage-earner in rising as compared with falling price periods is not capable of simple statement. It probably varies with different groups of workers, and in addition to this there seem to be numerous conflicting elements in the situation. For the most part salaried people and fee taking professional classes gain through falling prices, although doctors and lawyers lose if the fall is preci-

pitate. The same is true in less degree of manual workers in so far as they are able to keep regularly employed. Wage rates with day labourers are, nevertheless, apart from trade union activities and legal restrictions, much more susceptible of reduction in correspondence with price changes, than is the case with salaried labour. Some degree of distinction may be made again between skilled and unskilled workmen, the former being less susceptible to cutting than the latter. Doubtless the generalization is roughly true that wages tend to rise and fall with prices but at some distance behind. But we hasten to add that this is no picture of the situation, where prices have slumped suddenly into depression and where armies of unemployed have disorganized the labour market. In such cases workers tend to be distinctly the losers even where successful in obtaining work. The thought may be suggesting itself that the chief consideration is not changing price levels, but different rates of change among individual prices—that if wage rates ran in correspondence with the price of bread; if butter kept pace with dairy instruments and auto-trucks, even though all were drifting upward or downward, there would be less cause for comment. This objection has some merit. Part of the problem is here, but the point remains that this phenomenon of differing rates of fall or rise itself is dependent upon the price level phenomenon; it seems to be of the essence of changes in price levels that individual prices do not move together. Some, such as house rents, for example, inevitably lag behind; and this secondary feature does give rise to part of the problem.

Yet there remains the equally significant problem of the changing level itself. And this would still stand, calling for our attention, even supposing it were possible to iron out the differences in the rates of particular changes. Debtors would still gain through rising and creditors through falling prices.

This leads us to conclude that the subject of changing price levels consists of two somewhat distinct sets of phenomena with as distinct sets of problems, the one being a matter of lag as between individual changes in a general drift upward or down, the other having to do with changing levels as such.

It would be wrong to lead the student to assume that the population divides clearly into groups, some of which gain from rising and others from dwindling prices. As consumers we all profit by falling prices, and, more important than that, many of us have our economic circumstances so ordered that rising prices favour us in one matter and falling prices in another. We must appreciate,

nevertheless, that there are some classes in the population mainly creditor and others mainly debtor, and every swing in the level of prices transfers the property of the nation in greater or less degree from the one to the other. There is no wisdom or plan in this. It is not the result of calculation or merit. The most worthy gestures of thrift and considered effort frequently result in less returns than one of these turns of luck. Says Professor Slichter, "Men who struggled and saved in their youth and prime to provide against old age may find, when the time of need arrives, that their savings have been cut in half by a sudden rise in prices. No one today really knows how much life insurance he is carrying because he does not know what will be the purchasing price of the dollar when he dies."²

He goes on to make the point that calculation of safe investment becomes, through this unpredictable influence, quite impossible; that the safest investment in government bonds becomes quite as speculative and perhaps more so than one in better class common stocks. Another student of the problem remarks significantly, "Everyone recognizes the importance of legal protection of property rights, but few realize that fluctuations in the price level may reduce to an empty shell the property value ostensibly safeguarded by a bulwark of legal protection."³

It cannot be too strongly emphasized that this condition of uncontrolled changes in price levels operates mainly toward injustice, unrest, and confusion. Not the least of the sins to be laid at its door is its part, as we shall elucidate in the next chapter, in bringing about periodic defects in production. Obviously one of the first duties of the economist is to seek a remedy for this great problem which at present makes calculation impossible and threatens to be the undoing of our exchange economy.

We next raise the question, "How are changes in price levels measured?" This is done through the use of index numbers which we now proceed to explain.

Index Numbers.—Index numbers are devices for comparing prices or costs of the same quantities of goods at different points (or short periods) in time. The method is to choose the price at some particular time, usually the average for a year, and, treating this as 100, calculate prices of all other times in relation to this. Thus if wheat in 1913 averaged 90 cents per bushel and in July, 1939, is

²S. H. Slichter, *Modern Economic Society* (New York, 1931), p. 498.

³F. B. Garver and A. H. Hansen, *Principles of Economics* (Boston, 1937), p. 344.

priced at 55 cents, the expression for the latter would be $P:100 = 55:90$, or $P=61.11$. Indexes such as this showing the record of price changes for single commodities are often spoken of as price relatives. Our concern, however, is with measuring changes in the general price level. For this purpose the principle is the same. Prices of all goods included are referred to a base period which is treated as 100, but whether the mere prices shall be considered separately and relatives averaged or whether allowance should also be made for the relative importance of the commodities included, or still some other method adopted, is a matter of the computer's choice.

An index by simple averaging, using only three commodities with 1926 as the base, would be as follows:

TABLE XXVIII

	Prices (wholesale)			Relatives		
	1926	1933	1938	1926	1933	1938
Gasolene, per gallon..	\$0.2525	\$0.173	\$0.158	100	68.5	62.6
Wheat, per bushel...	1.495	0.61	1.015	100	40.8	67.9
Pulpwood, per ton...	29.67	20.43	21.76	100	68.9	73.3

$$\text{Index for 1933} = \frac{178.2}{3} = 59.4$$

$$\text{" " 1938} = \frac{203.8}{3} = 67.9+$$

No allowance is made here for relative importance. This may be done by "weighting" the more important commodities through using multipliers. Thus, if it is estimated that the importance of the three is expressed by the proportion 1, 3, and 2 respectively, we should multiply the price of wheat by three and that of pulpwood by two and divide the new total by six.

A more exact way is to use, not the simple price but the price multiplied by the amount of each commodity actually exchanged during the base year (or perhaps during some other chosen period) and adding these results for any year whose index is desired refer them to the aggregate of the base year similarly derived considered as 100.

The last or aggregative type of index number is the one most generally used today. The two well-known series dealing with wholesale prices in the United States published by the Bureau of

Labour Statistics at Washington are of this type. One of these uses 1913 as its base year and the other 1926. The latter employs over 700 commodities and gives both annual and monthly numbers. A similar index number of wholesale prices in Canada is kept by the Dominion Bureau of Statistics. It likewise uses 1926 as base year but embraces only 502 commodities. The numbers are made up month by month and these are then averaged for the year. Table XXIX shows some of the annual numbers since 1913. The commodities are arranged by groups according to the chief component materials and these groups vary considerably in their ups and downs.

Another index number of wholesale prices is constructed by the Bank of Nova Scotia based upon the prices of only eight commodities, viz. wheat, cotton, copper, rubber, coal, gasoline, pig iron, and sugar. The base period used is the five years 1922-6, and the index number is obtained by taking the geometric mean of the percentage changes in the prices of the several commodities.

Index numbers of retail prices of foods and of cost of living are maintained by the Dominion Bureau and Dominion Department of

TABLE XXIX

DOMINION BUREAU OF STATISTICS WEIGHTED INDEX NUMBERS OF WHOLESALE PRICES IN CANADA BY GROUPS ACCORDING TO CHIEF COMPONENT MATERIALS
(Average prices 1926=100)

	I Vege- table pro- ducts	II Ani- mals and their pro- ducts	III Fibre, tex- tiles and tex- tile pro- ducts	IV Wood, wood pro- ducts, paper	V Iron and its pro- ducts	VI Non- fer- rous metals and their pro- ducts	VII Non- metal- lic miner- als and their pro- ducts	VIII Chem- icals and allied pro- ducts	All com- modi- ties
No. of commodities	124	74	60	44	39	15	73	73	502
1913.....	58.1	70.9	58.2	63.9	68.9	98.4	56.8	63.4	64.0
1920.....	167.0	145.1	176.5	154.4	168.4	135.5	112.2	141.5	155.9
1926.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929.....	91.6	109.0	91.3	93.9	93.7	99.2	92.9	95.4	95.6
1933.....	59.3	59.4	69.7	62.8	85.4	64.3	84.4	81.3	67.1
1937.....	88.4	78.4	72.8	76.7	101.8	83.8	86.6	81.4	84.6

Labour.⁴ The latter is developed upon a basis of weekly family budgets and shows differences among the various provinces.

For many purposes the most useful way to present an index number series is by means of a graph or curve. The Dominion Bureau of Statistics' annual index number of wholesale prices is thus shown in Figure 35, along with another curve depicting the changing cost of living.

History of Changing Price Levels.—The student will have inferred from the above that changing price levels are not a phenomenon of today only. It is now known that they have long been with us, that they played their part in medieval times, that they date back, in fact, to the beginning of borrowing and lending in terms of money. While some of the earlier economists paid their respects to the subject (Adam Smith in particular noting in 1770 how gold served poorly as a long time standard of value, and John Stuart Mill, seventy years later, reaching after the same problem in his study of the causes of the value of money), yet it was not until the end of last century that scholars began to attack the matter seriously. The determination of the laws of individual commodity prices was the central interest of the nineteenth century, whereas price levels, their changes and regulation, took the centre of the stage as the theoretical problem of the early twentieth century. The reason for this was partly a matter of the growing size of the phenomenon with the expansion of the credit economy. Our society has become a net-work of contracts for future payments. Its roundabout production, its corporate organization, its vast aggregation of fixed capital, all pave the way for, and depend upon, investment, long term as well as short. Governments vie with corporations in issuing bonds of forty years' duration. Insurance companies and loan and mortgage associations among other specialized institutions assist in tying the present to the future in a financial conglomerate through millions of deferred payment agreements. Consumption too, though always involving more or less credit, was organized anew in the same direction (in the twenties) through the device of instalment buying. A monetary unit that changes in purchasing power is vastly more serious than ever before inasmuch as its effects are registered on almost the whole body of citizens.

The second part of the reason for this being the favoured subject

⁴The concept *general price level* strictly defined is broader in its reference than any of these. It would cover a blend of wholesale and retail prices, wages, rents, and whatever, in fact, is bought and sold with money.

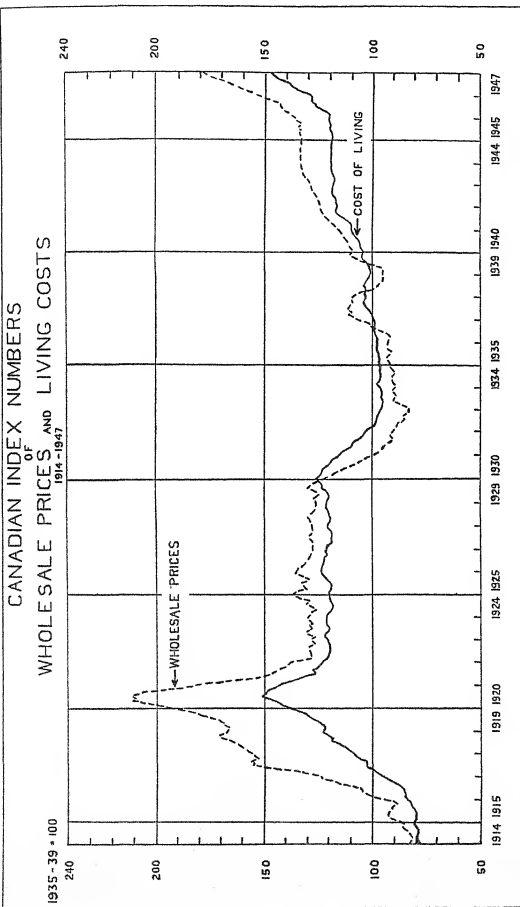


FIGURE 35.—The course of wholesale prices and living costs in Canada, 1914-1947 (1935-39 = 100).

of the present century is found in the discovery of the statistical devices which we have just been presenting. By means of index numbers and carefully arranged tables and charts it has become

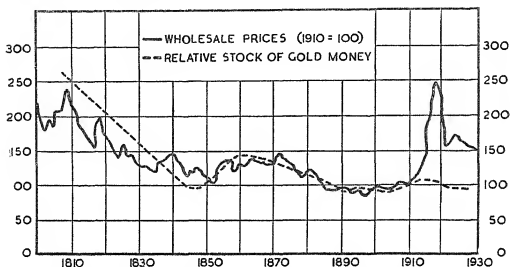


FIGURE 36.—Taken from *Proceedings of the Canadian Political Science Association*, vol. III, 1931, p. 98; adapted from Kitchen, *Interim Report of the Gold Delegation* (Geneva, 1930).

possible to measure the problem and in so doing to relate it to other events and so understand its nature. How this transpires will be appreciated by giving a few moments' attention to Figures 36 and 37.

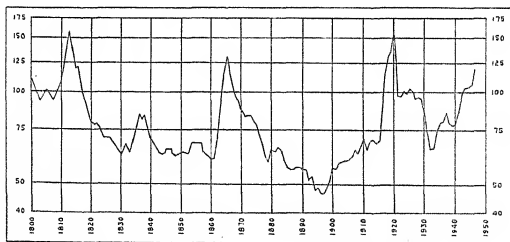


FIGURE 37.—Wholesale commodity prices in the United States, 1800-1947. Base, 1926 = 100.

Figure 36 shows the graph of wholesale prices from 1800 to 1930, with 1910 being taken as the base. It is significant that the highest points to which prices attained during this period of 130 years were

coincident with the greatest wars of the period, viz. the Napoleonic and the recent World War.

Figure 37, which represents the trend for the United States only, as contrasted with the world curve shown in Figure 36, shows a third point at (approximately) 1865. This, it will be remembered, corresponds to the time of the Civil War. This conflict apparently was not of sufficient world importance to cause more than a ripple in world prices, but the comparatively vigorous upturn in the curve of Figure 36 in the middle fifties suggests that the Crimean War registered its effect.

Reference to both curves brings out another point. There are discernible, covering the whole period 1790-1933, three great complete swings upward and down with an obvious rise since 1933. One might say that, other than that, there is no definite trend in price levels for the century and a half. As a matter of fact, *world* prices were in 1910 exactly where they were in 1850. In 1918 they were back with those of 1809. Yet these great waves if studied have significant lessons for us. Starting from a low in 1790 the curve mounts and reaches low again about 1850; the second swing ends with 1897; the third is possibly not yet complete. Are we justified in thinking that history will repeat? That the same or similar forces are again operating to complete a fourth swing? Moreover (and this is the burden of our inquiry), what are these forces?

Another point that must have claimed the observer's attention is that these waves are themselves not smooth but roughened by lesser modulations. These lesser waves are not to be discounted through the comparison. It will be observed that the slope up and down in their formation is frequently more abrupt than the longer swings of the others, which suggests extreme price variations for brief periods. They represent what have become known to the economists as business cycles. The larger waves represent the longer secular trends. It should be appreciated that, while they seem to be distinct and perhaps are the result of different economic forces, they are nevertheless always associated, and it is not always evident to the people experiencing a condition of falling or rising prices, which movement is chiefly responsible.

What Determines the Price Level?—To answer this question the best approach is the indirect one. Let us point out once more that the price level at any time is merely the obverse of the value

of the dollar, for the value of the dollar as of everything else is its general purchasing power over goods. To talk about low prices is to talk of dear money. Whatever, then, determines the value of the dollar determines also the level of prices.

The value of the dollar is determined like the value of anything else by its demand and supply. Increase the demand, the value rises. Increase the supply, the value falls. It behooves us, therefore, to look into the peculiar nature of these.

This is generally admitted to be true. But interpreted crudely it is quite untrue. What very few people do understand is just what is meant by demand and supply in this case. During the recent depression there have been many who have believed that all that was necessary to be done to increase prices (that is to lower the value of money) was to print additional quantities of paper money. Under some conditions such a course would undoubtedly lower the value of money but under the conditions of depression it would probably have little effect. The explanation of this, as we shall endeavour to make plain, lies in the complex nature of the demand for money.

But first, what is meant by supply of money? The answer is, all forms that are offered in actual circulation, and for purposes of our analysis here we must add bank credit. Much of the actual exchange of goods, as we have seen, is accomplished through the writing of cheques. In other words, the supply of money means here the entire circulating media. Strictly speaking, therefore, this whole discussion on price levels concerns the amount of circulating media rather than the amount of money proper, described in an earlier chapter. Supply here does not include the gold coin or bullion held in government treasuries or as reserves for bank notes and deposits. These are not offered in the market; they do not constitute supply although they are, as we have learned, very significant in influencing the supply, especially of bank notes and deposits. Money that has been hoarded with the definite purpose of leaving it so, likewise, no longer constitutes a part of effective supply. The full meaning of supply will be developed in the next paragraph in connection with the different uses of money.

Next, what constitutes the demand for money? The answer is the demand for money is simply the demand for the functions of money. Money is not eaten, worn, or otherwise directly consumed. Of the functions of money again, only two concern us here, viz. that of a medium of exchange and that of a store of value. The

other two functions use it as a reference but make no demands upon it quantitatively. But as between the two functions which do constitute the demand it is necessary to make a clear distinction. For quantities that are definitely hoarded are completely taken out of the market so far as their possibility of being used as a medium of exchange is concerned. Moreover, of all that remains, which has not been labelled as hoarded, it is nevertheless true that at any point of time—say a day—the amount that is actually being used as a medium of exchange is only a fraction of the total. Most of it is lying idle in pockets and money tills and tellers' boxes, really serving as a store of value until it shall be called into use as a medium of exchange. Once it has been so called upon and has served to complete business transactions, it reverts again to idleness serving as a store of value for new owners. Every dollar alternates between its use as a medium of exchange and as a store of value. Now the question is, "How long does it lie idle? How frequently is it called into action?" For if it is used twenty times a year its effect in completing exchanges is twenty times as great as if it is used only once. In other words, while the supply of money at any one point of time cannot be more than the actual quantity existing, over a period of a year supply means the quantity available multiplied by the number of times it is used. Only in this sense is it true that the value of the dollar is determined by its demand and supply. Mere issuance of more paper money would not increase prices one iota unless it went into use as a medium of exchange. If it were hoarded or if it served only to increase the period during which money, on the average, lay idle in people's pockets between transactions, it could not affect the value of money or, in other words, the level of prices. While we have spoken of a dual demand for money, therefore, we need, in accounting for its value, concern ourselves only with one. What is arbitrarily hoarded may be considered as definitely out of action, being no longer a part of supply offering in the market. What is lying idle in pockets and tills is only incidentally serving as a store. Its real purpose is to serve later as a medium of exchange and its incidental use as a store does not of itself constitute a demand. The significant thing is the number of times it is called upon during the year.

We may return, then, to the statement that value of money varies directly with its demand, meaning thereby the number of exchanges of goods in which it participates, and inversely with its supply meaning the actual amount of media of exchange available

multiplied by the number of times it is used in effecting such exchanges during the period under review. Symbolizing this we may write it:

$$Q \propto \frac{T}{MV}$$

where Q stands for value of money, T for business transaction, M for amount of money, and V for velocity of its turnover. Inasmuch as the values of commodities are always equal to the dollars that we pay for them, we may write it as an equation

$$Q = \frac{T}{MV}$$

But we started to investigate, not the value of the dollar, but the determination of the price level, noting as we did so that the price level was simply the obverse of the value of the dollar. In other words, calling the price level, P , P will be the reciprocal of Q . Substituting this in our statement of proportion above we have

$$\frac{1}{P} = \frac{T}{MV}$$

which for our convenience may be inverted to read:

$$P = \frac{MV}{T}$$

This is the well-known equation of exchange as formulated by Professor Irving Fisher. It is better known in the form $MV = PT$, and is frequently elaborated to distinguish bank deposits from actual money by writing these separately as M_1 . The equation then becomes

$$MV + M_1V_1 = PT$$

The meaning of which let us state in review, is the amount of money multiplied by the number of times it is used in a year, plus the amount of bank deposits multiplied by their velocity, equals the price level multiplied by the amount of goods exchanged.

Controversy over Cause of Changing Price Levels.—Much controversy has raged around the question of what really accounts for the phenomenon of secular price changes. Or, otherwise expressed, what explains the long-time trends in the value of the dollar. Referring to the equation of exchange which we may now accept as true,

$$MV + M_1V_1 = PT$$

it is evident, from the law of equations, that a change in P may result from a change in any one of five variables. If the amount of money M were increased while the other four remained constant, P

would increase. If bank deposits M_1 were increased, all the others remaining constant, P would increase.⁵ If V or V_1 were to increase, the other four remaining constant, P would increase. If T were to increase while all on the left side of the equation were constant, P would decrease. What are the facts in actual life? The advocates of the quantity theory of money, insisting that the value of money must ever depend upon its quantity in relation to the volume of business to be done, tend to place the emphasis upon the trend of gold production in relation to the increase in commodity production. If they find gold output slackening in proportion to the latter they look for the purchasing power of the dollar to rise, or, in other words for the price level to fall. They seek explanation of all the secular swings as pictured in Figure 36 in these terms. Calculations were put forward in the early thirties to account for the depression. If there had been no World War I, we were told, there would have been a slow rise in prices until about 1918 and then a slow fall in the twenties until at their close they would have stood somewhat below 1913. The indications were stated to be, moreover, if political difficulties were settled and gold supplies got distributed again in normal proportions among the nations, that we might anticipate falling prices until 1940.⁶ How valid was this reasoning?

Our analysis has shown that gold does not enter into circulation, and that it is circulating money and bank deposits (M and M_1 in our equation) that are significant. What bearing, then, has gold upon prices? The reply is that gold serves as the reserve basis for both M and M_1 and, moreover, the proportion of gold to each is rather definitely prescribed by custom and in some countries by law, and is maintained by changing discount rates by central banks. How fully this is true is hard to estimate. When the Federal Reserve Act was passed in the United States, for example, there was made possible the building up of a greatly increased structure of bank notes and deposits on a given amount of gold. We know, moreover, that during the past two decades the reserves of the Federal Reserve Banks have varied vastly in proportion to deposit liabilities of the member banks. Different nations, again, have turned so many corners in the course of a century, including

⁵For increase in M and M_1 in Canada since 1935 see Table XXVII and consider relation to rising prices.

⁶For examination of literature on this topic, see W. A. Mackintosh, "Gold and the Decline of Prices" (*Proceedings of the Canadian Political Science Association*, vol. III, 1931, pp. 88-110). Gold output, in fact, increased beyond expectation, mounting from 19 million fine ounces in 1929 to 36 million in 1937.

changing from bimetallism to gold alone, dropping off the gold altogether, manoeuvring to get back on, developing larger use of bank cheques—(now comes a suggestion for the partial use of silver in settling international balances)—that we must be guarded against too complete an acceptance of the statement that M and M_1 run in correspondence with the amount of gold. Again, supposing they do, have we not seen that a reduction in V or V_1 might completely counteract any increase in M and M_1 rising through an increase in gold output. Certainly this is true in connection with business depressions. Bank deposits and money do not cease to exist. Rather they lie idle experiencing a great reduction in rate of turnover. To this the exponents of the gold explanation reply that this is only a temporary phenomenon; that other causes must be looked to, to account for our financial behaviour during business depressions; that M and M_1 may lie idle during periods of depression but the next swing of prosperity will call them again into full use. If people have more they will, in the long run, spend more. V and V_1 , they maintain, are rather constant and dependable taken across longer periods. They tend to speed up somewhat with increase in density of population and improvements in transportation, but otherwise are written deeply in the business habits of a people. This issue we believe to be a vital one. The true supply of money over a period we have explained is not M but MV . The case of the quantity theorists, therefore, stands or falls according to whether or not V is really a fluctuating factor. It is a question which, at the present time, we cannot answer finally on the bases of factual findings.

Another limitation upon the complete dependableness of the argument of the quantity theorists is found in T . Does the volume of production reflect in an adequate way the amount of transactions calling for the use of circulating media as between two different (perhaps widely distant) dates? The combination movement occurred bringing greater integration into industry. In the steel industry, for example, steel products are worked up from the iron ore to completion without involving a single change in ownership during the process. On the other hand, speculation on produce and stock exchanges is the basis of a vast quantity of business transactions which have little relation to volume of products.

Another question that engages us in view of all the possibilities of this equation, is this: why does an increase in money, owing, let us say, to a gold strike, necessarily register on P ? Assuming V to be

constant, why not on T ? The answer is that practically, T , while it would be increased in the long run, would be so through the stimulation given first to P . Producers are encouraged to increase output chiefly through the lure of higher prices and better margins of profit.

But we must not assume that the initial influence causing a chain of effects always enters on the left side of the equation. Assume a year of good crops all over the world, what happens? Other factors remaining constant, P will fall. Other factors, however, never do in any of these cases stay altogether constant. M_1 will be stimulated. So will V_1 and to some extent V . In the sum total P may be expected to drop somewhat through the set of inter-conditionings that are developed.

Finally, what of P itself? We are considering it as an effect and are seeking to know why it is influenced thus and so. As we have seen, it is merely the reciprocal of the value of money and the value of money is itself a result. It is determined by demand and supply. But while it cannot initiate, it is true, it is nevertheless equally true that once affected it becomes a link in a chain of influencing. An increase once accomplished in P stimulates all the others one way or another. It is interesting to note, however, that while it tends to increase M_1 very directly and in less degree M , it will operate to decrease the output of gold which underlies them both. This it does because of the established ratio between gold and the monetary units of the different countries. With higher prices it costs more to produce an ounce of gold and the ounce furthermore commands less commodities. Hence gold production declines. Contrariwise, when price levels fall, gold mining is stimulated. In considerable degree price level changes thus provide their own corrective.

Explanation of Secular Changes of the Last Century.—Reverting back to Figures 36 and 37, we are now in a position to attempt a brief explanation of the secular curves there shown. We have remarked that the main upswings have synchronized in time with three great wars. It is a well-established popular belief that wars cause high prices and here we seem to find inductive support for it. But what is the deeper explanation? It is easy to recall in connection with World War I how the majority of the nations deserted the gold standard and issued large quantities of fiat paper. This accounts for the high paper money prices in such countries. But why the high prices in the United States which held to the gold? The answer is that much of the world's gold flowed to the United

States during the war years and thus made possible a greater development there of money and credit. The war, moreover, provided not only increased quantities of circulating media, but it also brought into existence a very real addition to demand for such funds through government purchasing activities. V and V_1 were not allowed to slacken. Governmental demand for munitions and war provisions gave an impelling desire to produce. Business firms vied with governments in using money to purchase goods, and bankers were not backward in assisting both in the effective development of credit. Wars always bring this vital combination of increased money and sustained circulation. Meanwhile, on the other side of the equation, the actual volume of goods did not keep pace with this increase in monetary supply. Similar circumstances appear to have been prevalent in the other war-stimulated price advances. In the 1860's in the United States we have already related the story of the greenbacks issued in quantities sufficient to displace gold completely. The sharp upturn pictured (Fig. 37), be it noted, is the greenback price curve, not the gold.

Considering the whole progress of the price level more in detail, (Fig. 36), the long drop from 1815 to 1850 is probably accounted for chiefly in terms of inadequate specie increase in a period when deposit banking was only in its infancy. At the middle of the century came the California and Australian gold discoveries which, supported by the Crimean and American Wars, caused the mid-century upswing. This weakened rather early, however, before a combination of factors prominent among which were the return of the United States to the gold standard, the change of several nations from bimetallism to gold, the great increase in business volume due to the progressive departure from domestic consumption of home-produced goods, the development of railways, and later the falling off of gold output. Coming to the turning point of 1897, the new upward trend was undoubtedly brought into existence by the improved way of refining gold, and the great gold discoveries in Alaska and South Africa, these being sufficient to overbalance the great increase in the volume of business which ensued during the period down to World War I. Some economizing of money also took place through development of clearing house activities and the centralization and the reduction of reserves. The latter was a development so far as the United States was concerned, however, following 1913. The down-trend 1929-39 is explainable in terms of a return to gold by different nations, a maldistribution of gold making for shortage in some nations,

thus limiting their capacity to develop bank credit, a great increase in volume of trade 1925-9, accompanied by a recession in world output of gold in the twenties.⁷ The last-named condition, however, was completely reversed in the present decade.

This attempt at historical explanation makes no pretence of being complete. The reader should endeavour to supplement it from his knowledge of economic history. Inasmuch as gold production figures prominently in our interpretation, a table showing gold output by years is presented below.⁸

Proposals for Stabilizing Price Levels.—Recognizing the evils of uncontrolled changes in price levels, students of the subject have come forward with various proposals of remedy. Centring attention upon the injustices between debtors and creditors, Professor W. Stanley Jevons of England fifty years ago proposed what has been called a *multiple or tabular standard for debts*. His idea was that a borrower should pay back not the same number of dollars that he had borrowed, but that he should repay the same amount of purchasing power. This was to be accomplished by making the principal of the loan vary with some officially established index number of prices. If a man bought a newly issued thousand dollar government bond today, for instance, payable in ten years' time and at maturity the price level was found to have fallen 10 per cent, he should receive from the issuing corporation not \$1,000 but \$900. (This position was taken in the early thirties by various debtor

⁷The extreme drop, 1930-2, is to be interpreted in terms of cycle analysis (chap. XXVI).

⁸THE WORLD'S GOLD PRODUCTION
Annual Average for the Period

Period	Fine ounces	Period	Fine ounces
	(thousands)		(thousands)
1831-40	652	1891-95	7,882
1841-50	1,760	1896-1900	12,446
1851-55	6,410	1901-05	15,606
1856-60	6,484	1906-10	20,971
1861-65	5,949	1911-15	22,213
1866-70	6,270	1916-20	18,891
1871-75	5,591	1921-25	17,326
1876-80	5,543	1926-30	19,434
1881-85	4,794	1931-35	25,831
1886-90	5,461	1936-37	34,480
		1940-41	45,700

groups in connection with the fall of prices after 1928. We are familiar with the argument especially in relation to the war debt controversy.) On the contrary, if the price level, as measured by the index number, was found to have risen 10 per cent, the bond holder should receive \$1,100. The multiple standard, it was suggested, should apply only to long-time debts. So far as short-term borrowing and lending were concerned, it would scarcely be practical.

Various objections, mostly of a practical nature, have been offered against its adoption. Among these are the complexity and confusion of two standards side by side; the difficulties of providing sinking funds for the retirement of debts when the amount at maturity is unknown in advance; international investment complications, etc. On the theoretical side, while the multiple standard appears to have real merit, it does not bring complete justice. If, during the ten year period in the above example, great economic advances are made through invention and discovery, why should not the lender as capitalist come into some of the gains? Why should he receive back just the same command over goods as he parted with a decade earlier? The general use of such a standard would hand over all the gains of society to the borrowing group.⁹

Furthermore, the plan lacks comprehensiveness in meeting all the problems through changing price levels. It seeks only to correct the difficulties of measuring debtor and creditor relations. The real source of the evil—the unstable dollar—is left untouched. Price levels still fluctuate.

The second proposal originated in the fertile mind of the Yale economist already mentioned, Professor Irving Fisher, and came in the course of a few years to enjoy a distinguished group of supporters. This is the adoption as a standard of value of what has been called by its author, *The Compensated or Stabilized Dollar*. Dr. Fisher's idea is, briefly, that the monetary unit—the dollar—should be not a certain weight of gold as we have had, but a variable weight so adjusted from time to time as to keep its purchasing power over goods practically constant. This, of course, would have to be controlled by the most competent authority. Gold would still be at the base of the monetary system, but it should not be allowed to cir-

⁹See J. L. Laughlin, *Principles of Money* (New York, 1903), pp. 54-5; copied in H. G. Moulton (ed.), *Principles of Money and Banking* (Chicago, 1917), p. 266. This objection in turn may be partially refuted by saying that the capitalist would participate in the average social advance through its inclusion in the interest rate.

culate. The government or central bank would maintain in its possession all monetary stocks of gold while paper money and subsidiary coins in forms not unlike those we have today should pass current among the people. All such forms would be redeemable in gold but the amount of gold to be given for a dollar would be determined anew from time to time in accordance with the official index of price levels. When that index pointed to a condition of rising prices over a period of, say, a month, the amount of gold content in the dollar would be increased; when it showed a falling condition, the number of grains would be reduced. Definite dates would be named in advance at which the content for the next period would be decided upon. Relations with all applicants for gold and sellers of gold would be governed during each period by the number-of-grains'-content of the dollar determined upon at its beginning.

The compensated dollar has undoubted merit as a general remedy for the evils of changing price levels. It aims at the core of the difficulty in attempting to provide a steady standard of value. Whether decreasing the content of gold in the dollar during times of falling prices would stop their fall is, however, open to question. The chief effect would seem to be to increase the amount of circulating medium. According to our analysis above, there is a tendency at such a time for such increases to lie idle. The increase in M is absorbed, so far as effects are concerned, by a decrease in V . We have seen how certain keen students have contended that this condition applied only to depressions—that V will return to normal when the depression is over. Nevertheless, it is difficult to see how the administrators of the plan would operate at such a time. Again, it is open to the minor theoretical objection that was offered in criticism of the multiple standard. Yet its chief obstacles are probably of a practical nature such as the administrative difficulty just mentioned, the inadequacy of index numbers, difficulties of a political and educational nature in getting it started, and most important, perhaps, international complications. In the early thirties, we heard much of its adoption on a world basis, but the probability of such a far-sighted action in a nationally conscious world seems very remote.

Some students of a more conservative type are of the opinion there is no reason for taking chances with such radical devices as the above. They maintain that the remedy is already at hand if we would only proceed to use it. They point to the *control of the discount rate* as a possible means to increasing or decreasing the

circulating medium in accordance with the readings of the official number. In this way they would accomplish results similar to those sought by Fisher and do it by resorting to less risky methods. Most important nations today have central banks which already use the controlled rediscount rate to protect gold reserves. Why not operate it as well to accomplish this new purpose? When price levels are rising, an arbitrary increase in the rediscount rate is soon reflected in rising member bank rates to their clientele, which operates to reduce M_1 . Supplementing this with open market transactions, central banks can accomplish a contemporaneous limitation of M . Prices must, therefore, cease to rise. Likewise, when price levels are falling, central banks might take the opposite course both with respect to rediscount rates and open market activities and thus bring a halt to the drooping tendency.

There are undoubtedly very serious limitations to the application of this remedy. Its critics maintain that central banks, while they may check rising prices, have little control over falling prices. Others note that the Federal Reserve System was powerless to stop the runaway stock market in New York in 1929. A change in the rediscount rate seems a minor consideration when a boom is on. Moreover, some have contended it is not the business of banks to control price levels and the attempt to do so will work to the defeat of their other responsibilities. In the authors' opinion, one of the greatest obstacles to the helpful working of this remedy is the national outlook and consequent lack of united action of the various central banks. Probably, too, there is needed a closer contact with the business community than that enjoyed by most central banks of today.

PRICE CONTROL

The basic function of the price system is to allocate resources and to guide production. During peace-time in a competitive economy this system works tolerably well. Apart from government control, direct or remote, of monopoly practices, the price mechanism is left free to achieve its primary purpose. But it is unsatisfactory in time of war.

Under conditions of a major international conflict, the economic system can not provide the armed forces with requisite supplies and at the same time take care of all civilian requirements. Some plan has to be devised for insuring that adequate quantities of goods and services necessary to the conduct of war will be forth-

coming, while simultaneously providing the civilian population with the "necessaries of life," e.g. "staple or other ordinary articles of food, fuel or clothing." The price system, if left unregulated, fails to accomplish this effectively; hence some form of control is essential.

The fundamental reason for the failure of the price system to meet the needs of a war economy is the competitive bidding between the government and private interests for control of economic resources. The government's needs are imperative; it must acquire command over large amounts of goods and services without delay. This means that the government cannot wait to secure all of its purchasing power from the proceeds of taxation and loans from individuals. Besides, it might be politically inexpedient to impose suddenly a heavy extra tax burden. The government, therefore, must obtain additional buying power by printing paper money or borrowing from the banking system. Either of these expedients (or a combination of the two) tends to cause an increase in prices, because there is a net addition to the circulating media. The inflationary pressure, generally speaking, does not become evident till a condition of full employment is approached. So long as it is possible to draw formerly unemployed resources into the productive process, the enhanced quantity of money will be matched by a larger flow of goods and services. But inflation results when full employment is achieved and the monetary supply continues to increase. In war-time the rise in prices of civilian goods is accentuated because a large portion of productive resources is being used to produce war materials. Hence goods for civilian use are in short supply and their prices tend to soar.

But the inflationary movement is not the only difficulty. There is also the problem of price relationships and allocation of resources. In a free enterprise economy the price of a particular article or service depends upon the prices of many other commodities. The price structure is interdependent. Consequently, competitive bidding between the government and private interests for productive facilities in war-time leads not only to an upward trend in the price level, but also to distortions in the price structure and maldistribution of resources, so far as the waging of war is concerned. The prices of essential and relatively scarce commodities will get much out of line with the general price structure (at least temporarily), and there is no guarantee that significant quantities of materials and labour important for war purposes will not be

diverted to civilian use. Broadly speaking, the government's war-time economic problem is two-fold: (1) preventing the price level from rising unduly, which movement would add to the financial cost of the war, and (2) the efficient allocation of resources for belligerent purposes.

Methods of Dealing with the Problem.—The first line of attack on the problem of price control is through an appropriate monetary and fiscal policy. While the government is under the imperative necessity of getting immediate control over economic resources partly through an increase in the money supply, care should be exercised to see that the net additions to the circulating media are not unnecessarily large. This is the concern of the Department of Finance and the central bank. Strenuous efforts should be made to siphon back to the government through taxation and borrowing from individuals the extra purchasing power in the hands of the public. The government must tax and the people must save if the price level is to be kept down during war-time. Hence the drastic increase in tax rates and campaigns urging individuals to save between 1939 and 1945. The same policy applies when price inflation threatens in peace-time.

The second line of attack is by means of price fixing. Basically there are two approaches to direct price fixing: first, the "selective" method and, secondly, the overall "ceiling" plan. The selective programme attempts to fix the prices of essential commodities, i.e. those necessary to the government's purpose, and allows the prices of other goods to remain free. The scheme appears to have much to commend it. Why bother about the price of lipstick and similar earmarks of modern civilization? Why not devote all attention to the basic goods and services in the belief that the prices of non-essentials will not get far out of line? In any case, why fix the price of anything before it shows signs of misbehaving?¹⁰

But selective price fixing has several disadvantages. In the first place, it fails to make due allowance for the delicate and complicated nature of the price structure. Since prices are inter-dependent, fixing the price of one article necessitates stabilizing the prices of a whole host of related commodities. Otherwise the requisite supplies might not be forthcoming and the price structure

¹⁰For an excellent description of price fixing in Canada during World War II, see K. W. Taylor, *The War-Time Control of Prices, Canadian War Economics* (Parkinson, ed., Toronto, 1942, 47-71; also "Canadian War-Time Price Controls, 1941-6" (*Canadian Journal of Economics and Political Science*, Feb., 1947, pp. 81-98).

will be further distorted. The prevalence of substitutes leads to price fixing on a grandiose scale. The delicately balanced price structure involves the price-fixing authorities in endless difficulties during either war or peace.

In the second place, selective price fixing results in discrimination. The producer who finds the price of his product controlled while that of other articles is allowed to go free naturally resents such interference, especially if profits are higher in the price-free fields. Furthermore, fixing the price of a finished good presupposes control of cost items (materials and labour) involved in the production of the commodity. It is unfair to fix the price of the end product unless the elements of cost are also stabilized.

In the third place, selective price fixing permits the diversion of resources to price-free fields of production. This trend can be arrested by either raising the fixed prices experimentally or by direct and rigorous control over the allocation of materials and labour. Finally, selective price fixing imposes a heavy political and administrative burden on those entrusted with the task of enforcing the programme. What prices should be fixed and when? What are reasonable costs and adequate profit margins? These are difficult questions to answer and place great responsibility on those officials entrusted with the task of selective price control. During World War II the Canadian government eventually chose the second alternative, namely, the universal price ceiling.

Price Control in Canada.—The overall ceiling or "price-freeze," which became effective in Canada, December 1, 1941, was a new venture in the realm of price control. It "provided that the highest price at which any person might sell any goods or any of the designated services was the highest lawful price at which he had sold those goods or services in the four-week basic period (September 15 to October 11, 1941 inclusive), and further that any customary or prevailing discounts or price differentials to various classes of goods must be retained."¹¹ This meant that the price ceiling "froze" the price structure existing at the time the programme went into effect.

As contrasted with the "selective" approach, the "ceiling" policy was "simpler, fairer, speedier and administratively more effective."¹² In the earlier stages at least, it relied upon the verdict of the impersonal market rather than the judgment of civil servants.

¹¹K. W. Taylor, "Canadian Wartime Price Controls, 1941-6," p. 84.

¹²*Ibid.*

Except in a few instances, it assumed that the prevailing prices were "fair." An essential administrative task became one of making adjustments in the exceptional cases. The administration of the programme was vested in the Wartime Prices and Trade Board.

The price ceiling policy was not, however, an isolated programme. The "frozen" price structure could not have been maintained, even after the ironing out of anomalies, if supporting measures had not been adopted. As in the case of the selective approach, the stabilizing of commodity prices necessitated the fixing of costs, hence wage and salary controls were instituted. In this connection it is important to observe that after a certain point had been reached and additional workers were drawn into employment, costs would rise as a result of increasing labour inefficiency, even if wage rates remained the same. Another difficulty with the ceiling method is that it deprives the economy of changing price ratios and the resulting shifts in the distribution of productive resources. In order to insure that materials and labour would flow into the required channels, schemes involving priorities, production directives, raw material allocations, distribution centres, and selective service regulations were instituted.

One of the chief problems in maintaining the price ceiling arose from Canada's economic relations with other countries. The defence programme and later the war effort of the United States gave rise to an inflationary price movement in that country. American prices of many commodities became higher than corresponding prices in Canada. Furthermore, Canada was compelled to import great quantities of essential goods from the United States. In order to counteract the impact of price movements outside Canada, the government took steps to insulate the Canadian price structure against shocks from external sources. The main features of this programme were: exchange control, import and export controls, subsidies, and bulk purchasing and selling by the government. Subsidies were used to insure an adequate supply of commodities deemed "necessities" by the Foreign Exchange Control Board. For instance, as the price of citrus fruit advanced in the United States, the commodity could not be imported and sold profitably under the Canadian price ceiling. Hence subsidies were paid on citrus fruit, provided it was imported in "reasonable" amounts. Subsidies were paid also to insure adequate domestic production of milk. In cases where real shortages of consumer goods developed,

a system of coupon rationing was devised to effect a fair distribution of the quantities available. An important phase of the price ceiling programme was a vigorous campaign of public education regarding the nature and necessity of price control.

To summarize, the Canadian system of price control during World War II involved appropriate monetary and fiscal policy, "freezing" of the price structure, control of production costs (especially labour costs), insulating the Canadian economy against outside price influences, a measure of consumer good rationing, and popular education. Where the price system failed to insure the required allocation of productive resources, direct measures were instituted.

It is generally conceded that the Canadian war-time price control programme was successful. Evidence to this effect is presented in the following chart which depicts the movements of wholesale prices in Canada during the two World Wars.¹³

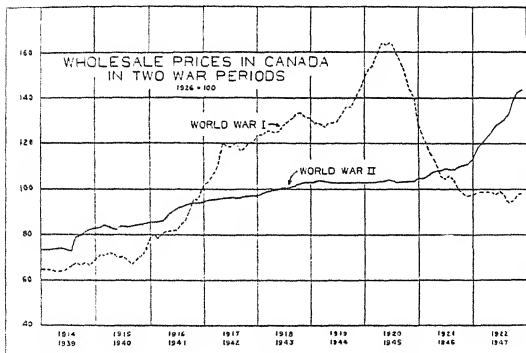


FIGURE 38.—Wholesale Price Movements in Canada.

A close examination of the chart shows a striking contrast in price-level variations in the two periods. The index stood at approximately 64.4 in July, 1914, and rose to 132.8 by November, 1918. During the post-war inflation period it reached 164.3 (May,

¹³Source: Dominion Bureau of Statistics, *Canada Year Book*, 1947, p. 925.

1920). In the other case, whereas the index was 72.3 in August, 1939, it only reached 103.7 by December, 1945. Furthermore, it should be observed that prices increased 14 per cent between the outbreak of World War II and the imposition of the price ceiling in December, 1941. That is, the major portion of the price-level increase in the war period occurred *before* the "ceiling" was instituted.

But the upward sweep of the price curve for World War II in Figure 38, during 1946 suggests a tendency to post-war inflation. Many commodities are still in short supply and the volume of money in the hands of the public remains high. In fact the supply of money in Canada at the end of 1947 was almost three times as large as in December, 1939 (\$3,944 million and \$1,370 million respectively).¹⁴ Under such circumstances a strong inflationary tendency prevails. The index of wholesale prices (1926 = 100) in June, 1947, was 127.8 as contrasted with 109.3 for the corresponding month in 1946.¹⁵ Further evidence of

¹⁴Bank of Canada, *Annual Report to Minister of Finance*, 1947, pp. 36-7.

¹⁵For sake of comparison we present here a chart of United States prices over the same war periods:

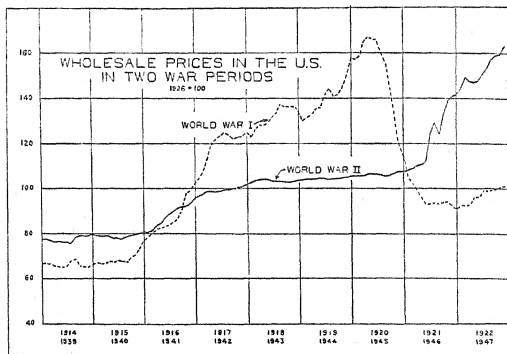


FIGURE 39.—Wholesale Price Movements in the United States.

inflationary pressure can be seen in the cost of living index (1935-9 = 100) which stood at 127.1 in December, 1946, representing an advance of 7.0 points during that year. Changes in the different budget groups were as follows:¹⁶

Item	December 1945	December 1946	Point Change
Food.....	134.3	146.4	+12.1
Fuel.....	107.1	109.2	+ 2.1
Rent.....	112.3	113.4	+ 1.1
Clothing.....	122.5	131.2	+ 8.7
Home furnishings.....	119.5	129.4	+ 9.9
Miscellaneous.....	109.6	114.1	+ 4.5
Total index.....	120.1	127.1	+ 7.0

In June, 1946, the cost of living index stood at 123.6 but during the next twelve months it rose to 134.9 (i.e. by June, 1947).¹⁷ Thus, as price controls were being removed, rising prices and living costs register the effect of economic forces as they operate to close the gap between the short supplies of consumer goods and the increase in the volume of money which resulted from war financing.

¹⁶Dominion Bureau of Statistics, *Canada Year Book*, 1947, p. 729.

¹⁷The cost of living index (1935-9 = 100) stood at 127.1 in November, 1946. It rose to 143.6 by November, 1947, an increase of 16.5 per cent in twelve months.

CHAPTER XXVI

THE BUSINESS CYCLE

INTRODUCTION.—Students of economic matters have long been conscious that industry since the time of the Industrial Revolution does not go forward steadily but shows a tendency to proceed by rhythmic movements. Periods of business activity have been followed somewhat regularly by periods of business depression. Industrial output varies greatly in accordance with this rhythm, suffering relapses instead of advancing regularly. Conditions of employment vary likewise, the period of depression presenting us with the phenomenon of millions out of work. While fundamentally a matter of the changing amount of business being done, the term "business cycle" has come to be used to characterize the series of changes that take place in the whole economic situation during the period from one economic depression (or prosperity condition) to a similar stage in another. It has been found that these changing industrial conditions are related to corresponding movements in prices, which fact brings us to associate the topic of the business cycle with the study of changing price levels of the preceding chapter. In fact, many of the observations there made about the consequences of price changes apply with equal force in the new connection. The student should be guarded, however, against thinking of business cycles entirely in terms of short-time swings in price levels as pictured in Figure 36. The "whole economic situation" mentioned in our definition just given involves much more as we shall see. We append here a further chart (Figure 40) calculated to reveal the sequence of cycles during the past sixty years in terms of changing volume of business in Canada. The general upward trend after 1896 as indicated by the straight ascending line, while naturally a source of gratification, need not concern us here. Our interest lies with the shaded areas above and below the line which portray the volume of business rising above or falling short of the normal trend. The older text-books in economics were wont to measure the length of the business cycle in terms of decades, asserting that depressions came every ten years. American students came to

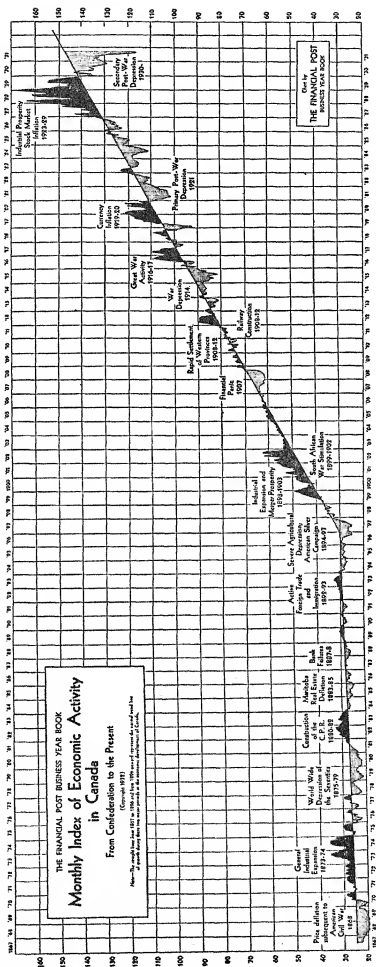


FIGURE 40

recognize especially the years 1837, 1857, 1873, and 1896 as landmarks of great depressions with lesser recessions lying about midway between these dates, and upon these pegs they hung their mental picture of business cycles. Later students operating with more adequate statistical records of business, production, and price levels, have done damage to this satisfying simplicity. Some have named four years instead of ten as the true wave-length. Others with their eyes directly on the records have concluded there is no very definite period. Professor Mitchell, on the basis of a study for the United States covering the period from 1855-1927, found there were during that time, nineteen definite cycles which ranged, for the most part, between thirty and forty-eight months, but one of which—that beginning in 1871—lasted for more than eight years. Examination of the accompanying chart, as developed by Mr. Floyd Chalmers of the *Financial Post*, will enable the student to draw his own conclusions concerning whether or not the Canadian cycles have been truly periodic.

Four Phases of the Cycle.—In approaching a subject as complex as this one we shall do well, before attempting explanation, to get before us as clear a picture as possible of the various phenomena through which it finds expression. This will involve us in a systematic examination of the whole series of events and processes which we find happening and moving together as the cycle goes on. Economists have found it advisable to divide the whole cycle into four stages or phases for purposes of study and explanation, each of which holds its place relative to the others in every cycle. These phases have been designated the periods of depression, recovery, prosperity, and crisis, although Professor W. C. Mitchell, the foremost American student of the subject, has taken issue with the terms as implying more than is frequently found in the actual situation and would substitute in their stead the terms recession, revival, expansion, and contraction. The point that he makes is well taken, especially in view of the hope that in the future the harsher aspects of business cycles may be eliminated and the contrasts between the different stages may be appreciably reduced. Nevertheless, there is much to be said for staying with the terminology that people generally are using and this we shall do in these pages.

As an aid to getting the picture of the business cycle and how it proceeds through these four stages, the student will do well to remember how the entrepreneur stands at the helm of our capitalistic society and how he ventures out on the deep waters only when

the prospects look good for finding something there. Profit is always a matter of selling products for more than the cost of materials and services going into them. The entrepreneur is ever calculating on the possibilities of that *spread* in the future. This profit aspect of the business cycle and the range of profit in the various stages of the cycle are illustrated in Figure 41.

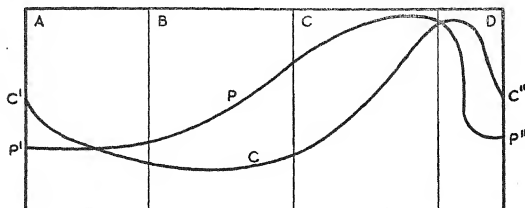


FIGURE 41

The curve $C'C''$ represents the curve of costs of, let us say, the average manufacturer over the whole period of the typical cycle. $P'P''$ shows the price curve for the same period. A , B , C , and D represent respectively the stages of depression, recovery, prosperity, and crisis. The space between the curves portrays the condition of profits which, it will be seen, develops into a loss in the period of crisis and in the first part of the depression period. Profits are at their maximum during the middle part of the prosperity stage.

Coming to a more detailed analysis, we find a whole group of factors operating in relation to one another throughout the cycle, tying in around this central feature of varying profit. Thus, in the early part of a depression, we find the physical volume of production very much below normal, business confidence is low following the shock of the losses incurred during the crisis, unemployment is high, the amount of retail sales, except for necessities, is reduced, stocks are large; among the elements of costs we find wages falling, though still moderately high due to the sustaining influence of collective agreements not yet expired or other forceful or customary circumstances; raw materials are down in price though probably in many cases they have not yet reached bottom; interest rates likewise are tending downward in countries where banking systems move in ready sympathy with business needs, for, with

decreased demand for funds coming from productive enterprises, bankers find the ratio of their reserves to liabilities improved. They are, nevertheless, very wary of taking risks; tax rates remain high.

As the depression wears on, while production and prices and business confidence remain unchanged, the elements going into costs drop still lower. Labour agreements run out and unions are unable to get employers to sign new ones unless the terms are made more favourable to them. The large numbers of unemployed make it difficult for organized, and impossible for unorganized, labour to maintain wage rates. As for the cost of business funds, since extreme caution still governs men's attitudes toward spending and investment, surplus money is deposited with the banks. As reserve ratios continue to rise, banks resort to unusual offerings in low interest rates. In nations where central banks play a part, this tendency is further stimulated through deliberate action of the central institutions which lead the way with extremely low rediscount rates. To low labour costs and low interest charges are to be added lower transportation costs and lower rentals and frequently more favourable prices in raw materials and in taxation assessments. The cost curve, as a whole, therefore, continues to drop as the depression period proceeds. Stock securities, nevertheless, remain low in keeping with the inactivity of investors.

A changed situation confronts us as depression passes into recovery. For here there comes a quickening of production. (Whether this emanates from an increased demand for goods due to changing attitudes toward spending or whether it results from previous supplies becoming finally exhausted during the prolonged period of inaction, or whether it comes from both, is a moot point and one which deserves further investigation.) Frequently, the return to activity of the construction industry is a prominent feature at this time. During recovery, costs remain low, larger numbers of workers find employment, buying strength reasserts itself slowly, and prices rise gradually under the stimulus of a quickening demand. Significant profits become again a feature of industry. Stocks begin an upward march on the exchanges. The desire to expand business enterprises increases. Investments are made in industrial equipment. Banks are called upon for larger borrowings to sustain the increased business.

With prosperity the tendencies noted in recovery are accelerated. Prices rise more rapidly. Output increases, confidence in the strength of the market becomes a habit, extensions to plant and

equipment are undertaken to enable the various enterprisers to produce more goods to supply the growing demand and to take advantage of the anticipated high profits. The prices of common stocks rise higher and higher and speculation becomes the chief concern of many people. With prosperity, however, there can be seen increases also in the most important cost factors, and particularly is this true as the prosperity stage draws toward its close. With unemployment becoming less of a threat, workers are demanding more wages. Organized labour especially is becoming conscious of its strong bargaining position. Furthermore, the less efficient members of the labouring class who have hitherto been idle are drawn into industry. Raw materials, as a result of the all-round demand, are advancing rapidly. Banks being increasingly called upon for loans, are building up high deposit and note liabilities at the same time as their money deposits are falling off which means their reserve ratios are dropping. Consequently, they raise their interest rates. Similarly, freight rates and other service charges swing upward.

Explanation of the Business Cycle.—So much for appearance, but what of the explanation of all this? Why do we have these interrelations and sequences? This question has been in process of being answered for more than a century and agreement as to causation is still incomplete. The phenomena of the business cycle go back to the beginnings of that larger exchange economy that grew up as the commercial phase of the Industrial Revolution. They appear to have come into being and run contemporaneously with the rise of distant markets and the manufacturing of goods in anticipation of demand.¹ Most of the attention directed toward them in earlier times was concerned with the crisis and depression aspects. We now turn to some of the outstanding business cycle theories.

Over-production and Misdirection Theories.—A popular line of reasoning and one of the first to be put forward is that cycles have their basis in over-production. Looking out at the situation as it appears in the early days of a depression, it is very evident that there are more goods than buyers. To all appearances, production gen-

¹Early precursors of the modern cycle are to be found in the speculative manias such as those known to historians as the "Dutch Tulip Craze" and the "South Sea Bubble" of the early seventeenth and eighteenth centuries. These, while they stand somewhat apart as famous examples of investment errors directed toward a single project, nevertheless exhibit many of the attributes of modern booms and crises.

erally has outrun the market during the prosperous period. Owing to technical advance and superior organization, the capacity to produce has out-distanced the capacity to consume. The chief hope for a return to prosperity is to wait for some of these excess goods to be used up when it will be necessary to start producing again. Remedy for cycles would seem, therefore, to lie in curtailing excessive production at any time. Changing methods and efficiency in production should be viewed as a social calamity unless accompanied by shortened working days. The economists soon pointed out the vital error in this argument, viz. that, fundamentally, in the exchange process, goods really buy goods: one man's product constitutes the purchasing power for another man's product, the farmer's wheat for the townsman's woollens and shoes and so forth, so that, as long as men produce in line with human wants there can be no such thing as general over-production.

A modern refinement of the general over-production theory appears somewhat more plausible. It ties in with the use of money as a store of value. While goods do, in large measure, buy goods in the long run, one man who has sold his goods for money does not immediately use it in buying other goods. If, for some reason, large numbers of men who find themselves thus in possession of money set high store by the money for future use instead of spending it immediately, the products of others from whom they should buy are left on their hands. As one student has expressed it, the marginal utility of money remains, for the time, higher than the marginal utility of goods. The argument would seem to have some merit, especially when few new consumption habits are forthcoming. The theory, when so expressed, would better be named *under-consumption due to over-saving* rather than the theory of over-production. But altogether these attitudes are characteristic of depression rather than prosperity and cannot be held to account for the break at the end of a boom.

A variant of the over-production theory and one that deserves more attention than the foregoing is that advanced mainly by socialistic writers. The statement is that, during recovery and prosperity, wages do not rise in keeping with the prices of the products of labour. Inasmuch as workers are the chief consumers, this means that purchasing power of consumers falls progressively short of the amount required to buy the goods. The disparity fails to reveal itself for a time on account of part of labour's effort being diverted into the production of capital goods, but sooner or later it

must come to light. This theory, it will be seen, undermines the time-honoured economic assertion that "goods buy goods" and hence that over-production is impossible by implying that labour services buy goods and that it depends upon how highly those services are rewarded how many goods shall be taken off the producers' hands. The proponents of the theory have not been concerned with applying it to other phases of the cycle, but logically we should hold them to the admission that during crisis and early recovery, with prices down and wages not yet at bottom, the relatively high wages should sustain consumption. In fact, however, this result is eclipsed by the effect of unemployment and we find the moderately good wages of those remaining at work operating more significantly to maintain costs than to draw up the prices of products through sustaining demand. Later, as we have noted, as depression passes into recovery, the lowered wages are a force for the enabling of expansion.

But, reverting to the first assumptions of this theory, are its advocates right in asserting that the wages of labour are responsible for the purchase of all or any definite proportion of finished products? If the income from industry does not go to wage-earners, does it not go to others as rents, interest, taxes, etc.? And, if this is true, is it not apparent that the recipients of these forms of income will spend it on goods? The answer to these questions is largely in the affirmative but not wholly so. Losing firms are disbursing in these various channels more than the whole value of their products. Prosperous firms—and these are in the majority in expansion periods—are disbursing less. They are accumulating reserves "which may not all be invested promptly in ways that sustain the demand for goods."² Probably a similar remark might be made concerning a fraction of those incomes disbursed as interest and rents. They do not turn to a demand for goods with the same immediacy as do wage incomes. They do not sustain the turnover of the retail shop. Herein seems to lie the remnant of truth in the socialist argument. As refined and elaborated at the hands of Messrs. Foster and Catchings, it may be stated the failure of incomes distributed to buyers generally to equal the full selling value of the products of industry and the failure of some buyers to use their incomes promptly in taking the goods, leads inevitably to over-production and depression.

Another variant of the over-production theory that is widely held asserts that recurring over-production of particular goods

²W. C. Mitchell in *Encyclopaedia of the Social Sciences*, ed. E. R. A. Seligman (New York, 1930 *et seq.*).

rather than over-production in the general sense is the explanation of business cycles. While admitting that goods do buy goods and that human wants as a total are insatiable, it is still plausible to argue that most wants are susceptible to comparative satisfaction, that they change in their intensity, and that enterprisers over-estimate their capacity to command goods in competition with other wants. The whole trouble lies in these errors in estimating the comparative intensity of wants in the future and the future position of buying power and in the misdirection of production.

If one industry expands out of line with the economy as a whole, it will be unable to sell its entire output at a price covering costs. It will curtail production and discharge labourers thereby reducing their purchasing power. This will be reflected in a decreased demand for the products of other industries, which, in turn, will find it necessary to restrict their scale of operations. If the over-expanded industry is one of national importance or if a considerable number of industries make the same mistake concurrently, a business recession is precipitated. There is in this view, it should be noted, no mention of rising price levels, over-expansion of credit, lagging of wage rates. The whole idea is contained in entrepreneurial errors in judging comparative demand for different goods in a private initiative economy. The more rapid the rate of change, the more roundabout production becomes, the greater would seem to be the probabilities of error. There is undoubtedly much merit in this argument but it does not constitute a full explanation.

A particular type of maladjustment that has been stressed by some economists is found in the too rapid development of capital equipment during prosperity in those industries that involve large fixed plant, such as railroads and heavy manufacturing concerns. A recent example is afforded in the activities of the various automobile companies in the later twenties. The turning of the savings of a nation into the creation of capital goods in such a large way over a period gets production out of touch with consumption and heightens the likelihood of error when all this increased capacity is brought into productive use.

Psychological Theory.—Another school of thought holds that the underlying causes of the business cycle are chiefly psychological. According to them, the cycle is due to alternating errors of over-confidence and under-confidence in the minds of business men and investors. All judgments are, of course, psychological, but the term, as here used, implies a domination of the mind by emotions of fear and

buoyancy having insufficient reason from the facts. The school finds support in the writings of certain psychologists who have made studies of mass phenomena and have reached conclusions about the contagion of mental attitudes. Confidence felt at one part of the business world breeds confidence elsewhere and pessimism spreads likewise. If business men are over-optimistic they may expand production far beyond the possibilities of the market, with the result that supplies are left unsold, or they may enter into programmes of plant expansion beyond the needs of the industry. If they are over-pessimistic, they may pass up good entrepreneurial opportunities, or bankers may fail to support good risks, and in either case the desired return to prosperity may be delayed.

Most economists today give some place to psychology in the shaping of business cycles but few see any reason or necessity for postulating that these contrasting mental states visit the business world and replace each other according to any law of recurrency. Psychology may, in some degree, explain the prolongation of a depression once we are in; it may also account for some of those excesses committed during prosperity that we shall presently show have much to do with the breeding of crises; it does not explain how we finally throw off a depression and turn it into recovery. Probably it is within the truth to say that business men are, for the most part, rational and their judgments run true to the facts so far as their knowledge goes, but that, during extremes of depression and prosperity, the emotions are allowed to play too prominent a part. To say that psychology explains the business cycle is probably neither more nor less true than to say that the business cycle explains the psychology. It is undoubtedly, standing alone, insufficient as an explanation—albeit helpful.

Innovation Theory.—Professor Schumpeter of Harvard University places great emphasis upon the effects of recurring differences in the rates of change in industrial invention and in production organization.³ Assuming a condition of economic equilibrium (where there are no unemployed resources and no incentive to move productive factors from one industry to another), a business cycle is initiated by an innovation. This may consist of the exploitation of a new invention, the development of a new source of raw material, the opening up of a new market, or a drastic change in business organization and methods. A sudden and substantial reduction in

³J. A. Schumpeter, *The Theory of Economic Development* (Cambridge, Mass., 1934).

interest rates making for lower production costs would be in the nature of an innovation.

Before the innovation entered the economic scene, business concerns had adjusted themselves to the cost-price structure. During the time when the innovation is being developed changes occur which disturb the old calculations. Once the innovation has been fully incorporated into the economic system, a new set-up of cost and price results to which entrepreneurs are compelled to adjust themselves. This resultant state of affairs is a new equilibrium which, apart from the influence of such drastic events as wars, famines, etc., will not be disturbed till the advent of another innovation or group of innovations. But the important matter for cycle theory is the process of exploiting and absorbing the innovation and the method by which this is financed.

If the development of a new invention or series of inventions was financed solely by the ordinary savings of the community, some readjustment would have to be made on the part of entrepreneurs. Old concerns would find their costs increased as productive resources were bid away from them in order to produce the new goods. However, since they now produce less, the price of their product would go up and they could carry on for a time even in the face of higher costs. Finally, as cheaper goods appeared on the market as a consequence of the innovation, old firms would have to adopt the new methods or go out of business. But the process requires time and there would be no violent fluctuations in prices and business activity.

As a matter of fact, innovations are not financed mainly by savings but through an expansion of bank credit. This causes much greater increase in the prices of commodities produced by old concerns than that which would occur if the innovation were financed solely by savings. Various industries are stimulated to expand output. Higher prices give an appearance of prosperity and firms which were in the process of decay are given a new lease on life. All sorts of inefficient entrepreneurs are encouraged to enter business. These ride on the wave of rising prices. As soon as the concerns responsible for the introduction of the innovation commence production, prices tend to fall and the high cost firms get into difficulties. This process is greatly accentuated as the former pay off their loans to the banks and credit is thereby restricted. Prices now decline rapidly and the inefficient concerns fail but in an effort to salvage something from the business they drastically cut prices.

This procedure results in a much greater fall in prices than that which would have occurred if there had been no bank credit expansion. The liquidation process continues till all the inefficient are weeded out. Prices then recover to the "neighbourhood of equilibrium" where they remain until another innovation disturbs the balance of economic forces. Professor Schumpeter refers to the building of railroads, cotton production, electrification of industry, automobile manufacturing, new methods in agriculture, etc., as examples of innovations. While admitting the importance of bank credit in his theory, he assigns to it a passive role and places his emphasis upon the innovation as the motivating force so far as the initiation of the cycle is concerned. We shall examine next the views of several other outstanding authorities who regard money and credit as playing a leading part in business cycle phenomena.

The Monetary Theory.—In so far as the business cycle involves price level changes, all explanations as to its nature must recognize the monetary mechanism as one element to be considered. But, as we have seen, many authorities do not look upon it as a dominating factor. It is otherwise with R. G. Hawtrey, who regards money (including bank credit) as the controlling agent in the cyclical variation of business.⁴ He holds that the business cycle is "a purely monetary phenomenon." In general, his explanation is as follows: Bank credit is inherently unstable, it tends to expand and contract in direct proportion to the amount of cash reserves held by the banks. The amount of credit affects price levels and price changes react on business and production. When the banks have surplus reserves, they lower their interest rates. This stimulates the trader, who is particularly sensitive to interest rate changes, to borrow from the banks for the purpose of placing an order with the manufacturer or other type of producer. The manufacturer hires labour, buys raw materials, etc., and this increases the purchasing power of labour, hence consumers' goods are bought in greater quantities. This is a further incentive for the trader to borrow from the banks and place more orders and the process is repeated. Business becomes brisker with a further expansion of credit. Eventually prices go up as costs to the producer increase. Rising prices act as an additional stimulus to economic activity. The trader now secures loans from the bank for the purpose of buying goods to hold, expecting to make an extra profit owing to the general upswing in prices. The process

⁴R. G. Hawtrey, *Trade and Credit* (London, 1928); also by the same author, *Currency and Credit* (London, 1934).

is cumulative in nature and continues till the banks increase their interest rates in order to protect their reserves. When this occurs, the trader ceases to give orders, the manufacturer discharges labourers, loans are liquidated, and prices fall drastically with the contraction of bank credit. The downward movement lasts until the banks again find themselves with excess reserves and attempt to increase their loans and discounts once more by lowering the interest rate. Hawtrey points out that there is a "lag" between the time that the process of credit expansion starts and the time when consumers begin to draw cash from the bank for hand to hand currency. Furthermore, cash does not start flowing into the banks concurrently with the contraction of credit; there is a "lag" here also. If it were not for the "lag" in the outflow and inflow of cash relative to the expansion and contraction of credit respectively, there would not be violent upswings and downswings in business because the banks would take steps to check their loaning operations earlier in the period of expansion and would lower interest rates more promptly as cash flowed into the bank. Mr. Hawtrey has certainly emphasized a leading factor in economic fluctuations but his view is not generally accepted as a complete explanation of the business cycle.

Savings-and-Investment Theories.—Of a somewhat different order, though closely allied to the monetary explanation, are the savings and investment theories. Two of the outstanding exponents of this approach are J. M. Keynes⁵ and F. A. Hayek.⁶ But their views are by no means identical.

A brief statement of Keynes's position is as follows: so long as net investment is kept equal to savings cyclical variations will be avoided. An increase of investment relative to saving stimulates a boom, whereas an excess of savings over investment results in a depression. Equality of savings and investment, assuming no change in the quantity of money, means stable prices and the absence of excess earnings. This equilibrium position is disturbed by the emergence of profits, or more accurately, by the "expectation of profits." If an entrepreneur sees, or thinks he sees, the possibility of increasing his gains by expanding in a certain direction, he will be obliged to increase investment. It is very unlikely that a corresponding rise in savings will take place. Consequently, the new

⁵J. M. Keynes, *A Treatise on Money* (London, 1930).

⁶F. A. Hayek, *Monetary Theory and the Trade Cycle* (London, 1932); also by the same author *Prices and Production* (London, 1932).

venture will be financed by means of bank credit. The result is an increase in the output and price of capital goods. Greater employment leads to larger expenditures on consumers' goods, hence their prices increase. Windfall profits are now available in both producer and consumer good industries, and a general programme of expansion is adopted by entrepreneurs.

This upward swing continues so long as new capital goods are being produced. But a turning point is reached when business men become fearful as to the profitability of further expansion. Costs tend to increase in the later stages of the upswing and as newly completed capital equipment comes into operation the flow of consumers' goods is greatly increased. This will have a depressing effect upon prices. If additional capital goods are not being produced either on account of fear as to the future among business men or the restriction of bank credit, incomes are depleted, prices fall, windfall losses are experienced, and a general deflationary movement sets in. Consumers postpone purchases in the hope of being able to buy at still lower prices. Savings now exceed the amount of new investment, a condition which is always characteristic of a business recession. Keynes contends that the banking system could prevent the slump by lowering interest rates further and augmenting its security holdings, thus increasing the amount of money in circulation. This policy would have the effect of keeping investment equal to savings because entrepreneurs would be stimulated to borrow and invest at favourable interest rates and income receivers would be discouraged from saving and would spend more. The Keynes plan has its supporters and its critics.⁷

Professor Hayek agrees with Keynes that in order to maintain equilibrium investment should be kept equal to savings providing the savings are voluntary in character. That is, under conditions where income receivers consciously decide to give up, or at least postpone, the consumption of certain commodities which the size of their incomes would permit. He parts company with Keynes in respect to the idea of keeping investment equal to savings through an expansion or contraction of bank credit.

So long as savings are made voluntarily, the "natural rate" of interest, the rate which would obtain with a given population and money supply, governs the proportions in which producers' and consumers' goods are produced. The "natural rate" may be altered

⁷Keynes modified the views outlined above in a later work entitled, *The General Theory of Employment, Interest and Money*. See next chapter.

by a change in the attitude of the community toward spending and saving, or by technological changes, or what Professor Schumpeter would call "innovations." From the entrepreneur's view-point an innovation making for cheaper production is equivalent to a rise in the natural rate of interest. In other words, it would pay the entrepreneur to offer a higher rate of interest in order to acquire funds with which to develop an invention rather than to continue with the old methods. The lower the rate at which he can borrow the more he can afford to invest in capital equipment. Low interest rates make for a roundabout process of production, high rates necessitate more direct methods.

If innovations are financed by voluntary savings, equilibrium is undisturbed. When an entrepreneur offers a higher rate of interest in order to finance the building of capital equipment and the community responds with greater savings, the demand for consumers' goods falls off as the output of this type of commodity declines. A smaller quantity is produced because productive resources have been drawn off to the capital goods industries. Consequently, there is no radical change in the prices of consumers' goods. The lower prices which will result from their subsequent increase in quantity due to the effect of greater capital equipment has been provided for in the calculations of entrepreneurs and is compatible with the maintenance of economic equilibrium.

It is important to note that in the above case the "natural rate" of interest and the "market rate," that is, the actual rate charged to the entrepreneur, are the same. It is otherwise when an innovation is financed through the extension of bank credit. Here the market rate is depressed below the natural rate and this leads to the familiar business boom and the inevitable collapse. In this case there is no increase in voluntary saving. The enlarged purchasing power furnished by the banks which is first used in the capital goods industries does not involve a corresponding reduction in the demand for consumers' goods and the prices of the latter tend to rise as their quantity diminishes. Moreover, as the augmented purchasing power seeps down from the producers' to the consumers' goods industries, the latter become quite profitable and commence to bid against the former for productive resources. This increases the cost of the capital goods industries and reduces their profit margin, unless a further extension of credit results in still higher prices.

But the banks, having regard for their reserve position, cannot continue to expand credit indefinitely. They eventually raise their

interest rate (the market rate). Many capitalistic (roundabout) enterprises which were just feasible at the lower rate now become unprofitable. These restrict production and discharge labourers, purchasing power is reduced, prices fall, firms go into liquidation, and a depression ensues. Hayek finds the root cause of the trouble in bank credit creation. Even in the absence of new inventions, etc., an expansion might be initiated by a mere reduction in the market rate of interest below the natural rate. Hence the stimulus may come from either the "goods side" or the "money side." Hayek, contrary to Keynes, argues that the only way to avoid a depression is to prohibit credit expansion of the sort here described. Moreover, if a depression does occur, the way to cure it is by the scaling down of costs through liquidation and reorganization of unprofitable firms, reduction of wage rates and other elements in the expenses of production, except the interest rate—unless it is above the "natural" rate. Briefly, Professor Hayek's remedy for a depression is a drastic and thorough economic house-cleaning. While there is much merit in this contention, a considerable number of economists believe that in the absence of a certain amount of deliberate patching here and there, the structure would collapse before the renovating process was completed.

Monetary Over-investment Theory.—Another variation of the savings-investment approach is known as the Monetary Over-investment Theory. This view of the business cycle has been emphasized in recent times by Wilhelm Röpke.⁸ This authority contends that the major cause of disequilibrium "is an excess of real investment in fixed and working capital in the sense that the rate of investment has increased in greater volume and in quicker tempo than is compatible with the preservation of economic equilibrium."⁹ The difficulty arises from the fact that a given increase in the demand for consumers' goods results in a proportionately greater expansion in the demand for capital goods—both fixed and circulating. On the other hand, a reduction in the demand for final commodities has a corresponding accentuated effect upon the requirements for capital goods. This phenomenon is known as the "principle of acceleration." The same idea is expressed by another writer as follows: "mere cessation of increase of consumption would

⁸See W. Röpke, *Crises and Cycles* (London, 1936). The simple explanation given here does not do justice to Professor Röpke's painstaking exposition.

⁹W. Röpke, "Socialism, Planning and the Business Cycle" (*Journal of Political Economy*, vol. XLIV, June, 1936).

entail a drop in net investment to zero. And since net investment is responsible for a large proportion of the activity of capital goods industries, a cessation of the advance of consumption, without any decrease in its absolute amount, would entail a vast falling off in the activity of capital goods industries."¹⁰ And the same author argues further, if a mere fall in consumption goods occurs, replacement of fixed capital goods may come to a complete standstill *for a time* since no substitutes need be found for the machines worn out.¹¹

As the rise in real investment and not in saving relative to investment is the core of the problem, a disturbance in the economic process might be generated if the new investment were financed wholly by voluntary savings. Röpke points out, however, that a change in the savings habits of the people of sufficient magnitude and suddenness to finance an important development is not liable to occur. Therefore, the funds for investment are provided by the banking system through credit expansion. Here Röpke's theory comes very close to that of Keynes and Hayek. Owing to the increase in real investment tied up as it is with the principle of acceleration, prices rise and business "prosperity" results. The process is halted by lack of opportunity for further capital development, by the saving capacity of the community, or by credit restriction on the part of the banks.

Professor Röpke contends that an increase in real investment would lead to a cyclical movement of economic activity even in a socialistic state. Under a socialistic régime there would be what he calls "authoritarian forced saving" as contrasted with "monetary forced saving" such as takes place in the so-called capitalistic countries. Authoritarian forced saving simply means that the governing authority compels individuals to save part of their incomes in order that the productive equipment of the country may be extended or maintained. *Forced saving* in our economic system is of a different character.¹² It originates when an expansion of bank credit (or government credit in the form of paper money) causes an increase in prices, thus preventing individuals with relatively fixed incomes from purchasing as many commodities as they were able to buy before the price change occurred. The command over goods which they formerly had is placed at the disposal of entrepreneurs and

¹⁰R. F. Harrod, *The Trade Cycle* (Oxford, 1936), p. 55.

¹¹*Ibid.*, p. 56.

¹²D. H. Robertson, *Money* (London, 1922); also by the same author, *Banking Policy and the Price Level* (London, 1926).

other borrowers from the banks, through the medium of credit expansion. Forced saving is always prevalent during the upswing of the business cycle. It is the price which certain classes in society must pay for rapid economic progress. Without it the rate of growth of productive equipment would be much slower. Some persons contend that in the end we would be better off if the rate of development were slowed down but maintained at a more even tempo.

Self-generating Theory.—Disagreement exists among economists as to how far business cycles are self-generating and how far they are the result of outside circumstances which are themselves recurrent or throw out recurrent streams of influence. Professor H. L. Moore, for instance, finds business cycles to be a consequence of periodic crop variations resulting from weather cycles which, in turn, owe their origin to the planet Venus, crossing directly between the sun and the earth once in every eight years. Prices of commodities are thus pulled along in the wake of changing crop conditions. Professor Schumpeter, as we have seen, emphasizes the influence of invention and change. The Swedish economist, Gustav Cassell, likewise, challenges the self-generating quality of these phenomena, holding that they are a by-product of the forces of progress. His idea is that periods of new invention and discovery and exploitation of new natural resources tend to divert energy in too large degree into the development of fixed capital such as railways, new factories, and other construction projects. The demand for these disturbs the balance between capital goods and consumers' goods and also their comparative prices during the prosperity period. But, like Schumpeter, he finds the initiating influence coming from without.

Contrasting with these are to be found the theorists that support most of the other theories we have mentioned. More especially, however, the notion of the self-generating nature of cycles owes its origin to Dr. W. C. Mitchell, who shows conclusively to the satisfaction of the majority of students that there are forces within our modern industrial and financial system itself which are always at work to produce changes which collectively and cumulatively amount to the rhythmic movements that we have described in the opening pages of this chapter.¹³ To follow his argument in detail would be beyond the scope of this work and also would mean a repetition of much that we have already written, but by para-

¹³W. C. Mitchell, *Business Cycles* (Berkeley, Cal., 1913), especially pp. 571-9.

phrasing and hasty résumé, we may indicate some of the high points.

A recovery starts with a legacy from depression. This includes low prices, drastic reductions in costs, narrow margins of profits, liberal bank reserves, conservative grants of credit, lessening stocks of goods, cautious buying, etc. "Such conditions are accompanied by an expansion in the physical volume of trade."

A partial revival of industry soon spreads to all parts of the business field. For the active enterprises must buy materials and current supplies from other enterprises, the latter from still others, etc. Meanwhile all enterprises which become busier employ more labour, use more borrowed money, and make higher profits. There results an increase in family incomes and an expansion of consumers' demands, which, likewise, spreads out in ever-widening circles. Shopkeepers pass on larger orders to wholesale merchants, manufacturers, importers, and producers of raw materials. All these enterprises increase the sums they pay to employees, lenders, and proprietors. In time the expansion of orders reaches back to the enterprises from which the initial impetus was received, and then the whole complicated series of reactions begins afresh at a higher pitch of intensity.

He then goes on to picture the cumulative expansion of physical volume of trade, orders for goods, price rises, differing rates of advance between retail prices and wages, retail prices and wholesale prices, etc., the lag and then the quicker advance in interest rates and supplementary costs as the prosperity phase proceeds. But, in these inequalities and in the pressure on bank reserves, stresses are developed. Prime costs then shoot up, and with the rising interest rates bond issues are hard to float at easy rates. Construction enterprises fail to get contracts and these reflect back on steel mills, foundries, machine factories, etc. If selling prices could continue to rise ahead of costs and rise in unison, trouble might be averted but this is impossible owing to the inadequacy of bank reserves, the legal limitations upon the rise of some prices such as public utility rates, limitations by custom or by long-term contracts in other cases, over-abundance of the product in still others. Thus does prosperity build up another "legacy" which is passed on to the stage of crisis.

It is easy to understand how students may get their attention centred upon some one strand running through this whole complex and so develop a particularistic explanation, and there is no reason to quarrel with them for so doing. Most of them are holding up an element of truth. Those, for instance, who stress the changing interest rate as contributing to swings in price levels and the too sudden denial of financial support at the extreme of the boom have

made a valuable contribution. So also have those who have called attention to the over-development of fixed capital during expansion periods, and those who have emphasized the changing psychology which has contributed to erroneous judgments of future business possibilities. Again the less recent observers who pointed out the pervasive effects of misdirection of industry and especially those who stressed the differential developing between wages and product-value or between total income disbursed and product-value have performed equally important service in their time.

Social and Economic Consequences of Business Cycles.—Writing as close as we are to what now is called the worst depression in history, it would seem paradoxical to visible reality to suggest any merit in business cycles. Nevertheless, it is implied in laissez-faire economics that business has its own ways of cleaning house and that production must encourage its fit and eliminate its unfit if economic welfare is to be served. Business cycles offer great opportunity in expansion periods for the striving and the aggressive, those who are ready to promote the large-scale economy and take the big risks. It is then that great developments are undertaken, fortunes largely are made, and great concentration of capital control is brought about. In crises, the less wary in business, those who have failed to read the future aright, perish, leaving their part to be performed by the others. Creditors and salaried people, as has been remarked in the preceding chapter, provided the depression is not too far-reaching, benefit by the lower prices that come through contraction.

In the total, however, it is idle to argue that economic welfare is served by the presence of uncertainties as vast and as incalculable as are those of cycles and depressions. In our present state of knowledge they offer additional opportunities to the speculative elements of society whose efforts are too often predatory and at the expense of those who would win their way in the steadier processes of production. To say that the shifts in economic ownership that took place as a result of the activities in the stock market in 1929 contributed in large measure to the purging of industry and the survival of the economically fit would be mere conjecture. Could we develop a technique for prophesying in advance just when the different phases were going to come, and make access to such knowledge available to all, the whole matter would become calculable and there might be argument for some measure of variability. But this would be to change the whole nature of the problem. As it stands, honest industrial leaders, able and efficient in the adminis-

tration and advancement of their particular industries, are lured on to their ruin by forces they have never been taught to recognize. Workers are subjected to a sequence of wages trailing behind advancing prices, and then periods when wages are good in terms of purchasing power, but grudgingly paid and in many cases wiped out by unemployment. Collective agreements and long-time contracts of all kinds work results at variance with the expectations of the parties. Labour difficulties are increased. Relations between mortgagors and mortgagees become unsatisfactory. Youth graduating from our schools and colleges frequently meets delay in its welcome into the workaday line-up. Population in total fails to synchronize with the resources of the nation as developed. There is too much truth in the statement that modern industry requires (at recurring periods at least) reserve armies of unemployed.

Remedy.—The case is clear, therefore, that great good would result from the cure or alleviation of cycles. There is no sufficient reason for thinking that nothing can be done to assist man in making use of invention and discovery and in turning the whole to his advantage in a continuous increase in production and a progressively higher standard of living. No magic wand or alchemic discovery is likely to do it for him. It is a task for scholar and statesman in the first instance rather than for the business man as we have up to now known the latter. The complexities of the problem suggest that remedies of differing types may be called for. The best assurance that progress will be made lies in the fact that the problem is being defined more clearly and many minds are working upon it. Along with the problem of changing price levels, it has taken its place at the centre of economic study.

(1) **A Controlled Credit.**—As might be expected from the differing emphases by different students in explaining the cycle, there are advocates of very different lines of remedy. Prominent among them today is that of conscious credit and monetary control. Keeping in mind that crises and depressions owe their rise to conditions existent in prosperity, it is proposed to control the excessive expansion in the latter through a better manipulation of credit. Instead of bankers issuing credit in accordance with the condition of their reserves and in relation to the possibility of immediate gain through expanding their loans, they should expand and contract credit in accordance with the idea of maintaining a stabilized level of prices and a steady volume of production. This does not mean, of course, that no allowance should be made for progress in industry, but

rather that production should be held in line with what appears on the basis of experience to be a normal trend. That expanding of credit which results in an increase in prices at such a time should be avoided. When industry is running at full and the labouring population are all at work, further increase of credit, these students aver, can only result in boosting of prices. Interest rates should be raised at such times and credit support for the building of unnecessary plant and the production of excessive storage stocks denied. Conversely, when tendencies toward falling prices and contraction assert themselves, construction and output costs should be made low through easy interest rates and ready support to all favourable projects. Likewise, consumers' credit should be made easy and accessible at these times and more expensive in periods of expansion. Central banks are to be a vital part of the paraphernalia of such control. Competitive banks could scarcely be expected to forgo opportunities of profits when rivals were at hand to take them up. Working indirectly through rediscount rates and open market operations, they could be used to control price levels and production volume, directing their attention to this purpose rather than the protection and adequate use of bank reserves. Undoubtedly, central banks have already attempted and accomplished considerable in controlling price levels by changing the interest rate but the controls have not been ample to the task.¹⁴ It has been found impossible, especially in the United States, for the central bank to encourage deserving industry with the support that it deserved and, at the same time, withhold credit from the uses of pure speculation. And then again, their first responsibility is that of gold reserves. Canada, with its limited number of banks, should do better on some of these counts.

This brings us naturally to the claims of Irving Fisher and his compensated dollar. If business cycles were entirely a matter of changing price levels, why not turn to this? But are they? It should be said in passing, that whatever the shortcomings of this line of treatment, it shows the way to great possibilities of improvement. Intelligent attention to the total amount of production and keeping price levels steady in relation to it through some centralized control of money and credit should be infinitely preferable to leaving everything to the individual entrepreneur controlled only by his banker. For the entrepreneur, be he merchant or manufacturer, is

¹⁴For Federal Reserve Bank's accomplishments, see F. B. Garver and A. H. Hansen, *Principles of Economics* (Boston, 1937), pp. 396-7.

guided by the price trend of his own product, as an indication of future demand, and governs his production accordingly. Inasmuch as this may be simply part of a general movement of prices, it may mean little or nothing relative to the actual shortage or abundance of the product.

(2) **Planned Economy.**—The concept of conscious planning may vary all the way from a small degree of centralized interference to complete socialism. Strictly, it carries the idea of a control extraneous to the business interest itself, usually meaning government. We might extend the meaning here, however, to cover organization into trade associations which should have for their function the examination and dissemination of information regarding the total stocks, goods in process, probable demand, and productive capacity of whole industries. More adequate collective studies of consumers' wants for different commodities, studies also of the future locus of buying power could be placed at the disposal of all producers. What could be done more than has been done by such means to prevent over-production and misdirection, without actual centralized decision as to total output of each good and agreement in advance as to proportioning in production, is hard to say but it is doubtless considerable. The more drastic step of advance agreement would bring in the fuller benefits of centralized control but would, in turn, open up other difficulties. Further speculation along this line as well as control through various ways of government interference or leadership, while intriguing enough, may well be left to the student.

(3) **Better Timing of Construction.**—We shall be saying much elsewhere about public works in connection with the subject of unemployment. We need to mention here only the possibility of using government funds and government credit to develop productive operations when private initiative is lagging or is unable to get financial support. The idea is that government should function in this way as a steadier of the volume of business. Through planning in advance, it could withhold construction or other work in prosperous times and carry them through when depression threatened. The suggestion has its merits but surely constitutes an admission of failure of our economic organization to perform its own task. The method involves, furthermore, a vast loss in idle plant and transfer of man power.

Certain writers have called attention particularly to the building industry as it is at present operated as being a chief sinner in the causation of cycles. The greater part of building of all kinds they

contend—business, residential, and public—takes place when industry is running strong and things are in the ascendant. The demand for building materials is seen as the greatest single factor in total demand. A regularization of this industry through some sort of control would, therefore, be of great service.

(4) **Education and Research.**—The possibilities of forecasting were greatly advertised during the recent twenties. Trends in selected factors in the economic set-up such as freight volume, steel production, bank clearings, especially in the great centres, were examined and interpreted for what they told of the future. The debacle of 1929-30 which, for the most part, escaped discernment until it arrived, damaged confidence in the oracular worth of all prophets. There is reason to think, however, that they will soon return with an improved technique to give their best to the business world. Quite as important is the need of wider general education on these matters of price levels and cycles. The majority of business men, expert though they may be in the immediate matters of their particular industries, lack understanding of these wider economic relationships. Investors cannot act intelligently without such knowledge. Consumers should understand their position and the causal part they play.

In the foregoing it has been necessary to consider the economic processes of the business cycle as standing apart from other influences. This, of course, takes us away from the realities of the whole situation. In real life these processes are clouded and overlaid with extraneous factors. Political influences such as wars, war-debts, their payment and renunciation, tariffs and quotas and economic nationalism; natural events like crop failures of staples, and chance happenings of human origin such as gold discoveries, and great unheralded inventions, all play their part. So true is this and so greatly do the evidences vary in different countries and at different times that some economists have come to deny the existence of recurring cycles maintaining rather that there is no necessary sequence such as we have pictured but that each business expansion and contraction must be explained with reference to its own particular set of events.

(5) **Fiscal Policy.**—Governments also attempt to control business conditions through a policy of spending, taxation and borrowing. This subject will be discussed briefly in the next chapter, and at greater length in Chapter xxxii.

CHAPTER XXVII

THE PROBLEM OF FULL EMPLOYMENT

FROM our discussion on the business cycle, it is clear that the economic system does not always operate smoothly and efficiently. There have been great fluctuations in the size of the national income produced and the amount of employment. Such wavelike movements in productive activity mean economic insecurity for various groups in society, particularly unskilled labourers. As we have seen in the preceding chapter, during periods of prosperity employment is at a high level. Almost anyone able and willing to work can find a job at wages far above the subsistence plane. On the other hand, in a time of business depression, employment is at a low ebb. Many workers can not find jobs at a "living" wage. The problem here becomes one of unemployment, or from another point of view full employment. In other words, what steps can and should be taken to absorb the idle workers into the production system?

Meaning of Full Employment.—Strictly speaking the concept *full employment* means that all employable labourers of all types would be engaged in some production enterprise. Even if this were possible there still would be some unemployed *resources*, e.g. sub-marginal land and obsolete capital equipment. Full employment, therefore, refers only to *human resources* and then only to persons who are mentally and physically capable of rendering labour services.

But from a practical standpoint, full employment does not mean that *every* worker must *at all times* have a job. In a dynamic society this is virtually impossible. Some industries are growing while others are declining. The advent of the internal combustion engine resulted in a remarkable expansion of the automotive industry and a rapid reduction in carriage building activity and blacksmithing. In the shift from one type of occupation to another a certain amount of "frictional" unemployment is almost sure to occur. Furthermore, in occupations which are seasonal in character it is impossible to avoid a certain degree of idleness during any given year. It might be observed also that events in other

countries, e.g. the raising of tariffs may cause involuntary unemployment in a particular country. In view of these facts, it is not to be expected that the working force will be 100 per cent employed under reasonably favourable circumstances. Except in extreme cases, such as war conditions, there will be a fringe of unemployment. Broadly speaking and for practical purposes, full employment means "the avoidance of mass unemployment."¹

Full Employment and War.—In the "thirties," mass unemployment was prevalent in our society. During World War II under the impetus of large-scale government spending for military purposes, unemployment disappeared. This question has been asked frequently: "If we can overcome unemployment under stress of war, why can not we cure it in peace time?" It is a pertinent question. It should not be turned aside with a superficial reply such as: "We are living on our capital in wartime and can not afford to *spend* so liberally under conditions of peace." It may be true that to some extent we are living on our capital while fighting a major war, but that is no reason why we should not set labourers to work creating new capital when peace returns.

"The avoidance of mass unemployment" in time of peace is one of the great, perhaps the greatest, problems confronting modern free enterprise society. Dictatorships (regardless of the name under which they operate), when economic inducements fail, *solve the problem directly*—by compulsory labour, concentration camps, and the firing squad. The last mentioned is a quick method of removing people from the labour market. The other schemes are not so direct. In a free society humanitarian considerations rule out such drastic means of achieving full employment. But the problem must be solved if we are to avoid a repetition of the "thirties." Some authorities contend that the "great depression" was no ordinary business recession. Its severity and duration indicated a fundamental defect in our economic order, a weakness (or series of weaknesses) which did not make possible a recovery in the usual sense of the term. The result was that, in the absence of outside influences bringing about an upturn in business, capitalistic economies were facing a condition of chronic unemployment.

Classical Doctrine Regarding Production and Employment.—The economists of an earlier era contended that widespread unemployment for any protracted period was impossible. This

¹Sir William Beveridge, *Report on Social Insurance and Allied Sciences* (New York, 1942), p. 8.

stemmed from their idea of flexibility in the economy which prevented general overproduction of goods. According to this view it was impossible to have production outstripping demand because the production of one article constituted a demand for other commodities. Thus production created its own demand. Orthodox economists would admit that too much of any one thing (in the sense that it could not be sold at a profit) might be produced in the short run. But this was a temporary situation because everything could be sold at a price—if the price were low enough. The price of an “overproduced” commodity would fall, additional units would be sold and the situation would tend to correct itself. Moreover, owing to another element of flexibility in the economy—namely, mobility of resources—factors of production soon would move out of the unprofitable enterprise into economically more satisfactory fields. This ready adjustment of prices and free flowing of productive factors facilitated production and thus promoted full employment.

But sensitivity of commodity prices and spatial mobility of production factors were not the only elements of flexibility in the classical conception of the economic order. Wages and interest rates, i.e. prices of the factors, also moved freely. Wages were the price of labour service and anyone who cared to work could find employment at *some* wage rate. Such unemployment as prevailed under these circumstances was “voluntary” in nature. Employers were always willing to hire additional labourers at wage rates lower than those currently paid. A similar set of forces applied to savings and investment. Interest was the price paid for the use of capital—savings in the first instance. According to the classical view, oversaving was impossible. If people saved a larger proportion of their incomes than usual, interest rates fell to the point where it was possible for entrepreneurs to borrow finance capital and use it to employ labour. The larger the amount of capital seeking investment, the higher the wage rate of the entrepreneurs. If the quantity of savings were small, interest rates, of course, would tend to be high. A small amount of capital for investment purposes meant little demand for labour. Hence wage rates would fall so low that it would pay the entrepreneur to borrow funds even at high interest rates. Under the circumstances thus described, all savings would be invested. Furthermore, it was the amount of capital (savings) relative to the labour supply which determined the wage rate. But in so far as all

savings were invested at *an* interest rate and all labourers, except those who voluntarily abstained, were hired at *some* wage rate, *the economic order reached equilibrium at a state of full employment.*

It is evident, therefore, that in the orthodox view the economic system was a self-adjusting mechanism. Price sensitivity in the commodity market, mobility of productive factors, and flexibility of wage and interest rates brought the economic forces of the country into equilibrium under conditions of full employment. For short periods, workers might find themselves without jobs, but in the classical school of thought there was no place for a condition of chronic unemployment.

The Keynesian Analysis.—With few exceptions the “self-equilibrating” philosophy of the orthodox school was accepted by economists till recent times. In the “thirties” the “equilibrium at full employment” theory was challenged by Lord Keynes. We have noted already some of Keynes’s ideas in the previous chapter as set forth in his famous *Treatise on Money*. His theory of the business cycle and cause of economic depressions as presented in the *Treatise* was elaborated and modified in a later work.² In contrast to the orthodox position, Keynes argued that general overproduction can occur in the sense that there may be a lack of *effective demand* for all goods produced. People may have a desire for commodities but unless this desire is coupled with adequate purchasing power there will be a deficiency of effective demand. Thus Keynes developed the concept of *Aggregate Demand*, the demand, not for a particular good as in our analysis of market price, but for goods in general.

Money and Aggregate Demand.—Since effective demand necessitates sufficient purchasing power as well as human wants, it is evident that money plays an important part in the demand for goods in general. The supply and use of money are extremely significant factors in the concept of aggregate demand. Unless the quantity of money in the hands of the consumers as a whole is adequate, goods remain unsold and unemployment will result. Here Keynes definitely parts company with the classicists. The orthodox economists regarded money merely as a medium of exchange, a convenient agent for the transferring of goods. In this connection Adam Smith compared money to a highway. The quantity of money, according to this view, was more or less a

²J. M. Keynes, *The General Theory of Employment, Interest and Money* (London, 1936).

matter of indifference.³ If it were small, prices would be low; if large, prices would be high. But the value of commodities necessarily would not be affected. It mattered little whether the price level were low or high, the economic mechanism would continue to function smoothly, except for temporary disruptions. The idea of a general lack of purchasing power leading to economic stagnation was foreign to their thinking.

While the teachings of the late Lord Keynes have been challenged vigorously by many writers, it is generally agreed that he made a great contribution in calling attention to ways in which alterations in the volume (and value) of money are associated with other changes in the economic system. He had demonstrated how variations in the quantity and use of money are reflected in the volume of production and the degree of employment. He pointed out, as we shall see, that our economic order is not the flexible, self-adjusting mechanism which the orthodox economists described. Rather, there are elements of rigidity, e.g., "sticky" prices and inflexible wage rates, which interfere with the readjustment process in the market for both producers' and consumers' goods. In view of such impediments to an adjustment in the cost-price mechanism, aggregate demand becomes very important. Hence the size of the national *monetary* income, as distinct from the real income, is a matter of great significance. Now let us consider the basic factors in the Keynesian approach to the problem of full employment.

National Income, Spending, Saving and Investment.—In our discussion on the national income (Chapter IV), we saw that the value of final goods sold constituted the income to society as a whole. In other words, the money spent for final goods was received as income by someone. That is, the amount of spending was the same as the sum total of incomes. Two things can be done with the money thus received as income. It can be *spent* or *saved*. For practical reasons, of course, at least part of it is spent. *Spending* means the purchasing of (1) consumer goods or (2) new capital goods. Spending on the former is called *consumption*, and on the latter *investment*. The portion of income not spent on consumers' goods is saved. All of this "saving" need not necessarily be spent on capital goods (i.e. invested); part of it may be held idle, or hoarded. Hoarding, then, is the difference between saving and investment.

³Classical economists, of course, did recognize the evils of inflation.

Since incomes are generated by spending it is clear that income equals consumption plus investment. That is to say, income is equal to the amount spent on consumer goods plus that spent on capital goods. It follows from this and our definition of saving that any reduction in consumption (expenditures on consumer goods) must be counteracted by an equivalent increase in investment (expenditures on capital goods) *otherwise income will diminish*. Some people will have less money to spend because others saved, i.e. refrained from spending. Aggregate demand (purchasing power of those who want to spend) will fall off as a result of increased saving on the part of certain individuals in the community, unless such augmented saving is offset by greater investment.

The relation between income, consumption, saving, and investment is numerically illustrated below. Here it is assumed that in Case A people save 20 per cent of their income and spend the remainder. In Case B, savings in Period 2 are increased to 30 per cent of income. There is an increase in saving without a corresponding rise in investment:

	Period	Income	Consumption	Saving	Investment
Case A.....	1.	100	80	20	20
	2.	100	80	20	20
	3.	100	80	20	20
Case B.....	1.	100	80	20	20
	2.	100	70	30	20
	3.	90	63	27	20

It should be observed that in both cases income in any one period equals consumption plus investment of the *preceding* period. In Case A, savings and investment are equal for all periods, hence there was no change in the size of the incomes. The condition was one of economic equilibrium. In Case B, however, the increase in saving during Period 2 without a corresponding rise in investment led to a fall in income in Period 3. If steps had been taken to increase investment to 30, i.e. keep it equal to saving, no fall in income would have occurred ($100 = 70 + 30$). Thus we see that an increase in saving relative to investment, or, what amounts to the same thing, a fall in investment relative to saving, will result in a decline of the national income. This in turn on account of the reduction in aggregate demand will lead to enhanced unemployment.

Conversely, an increase in investment relative to saving will tend to augment the national monetary income and have a stimulating effect upon economic activity.

Equilibrium at Less than Full Employment.—Contrary to the arguments of orthodox economists, Keynes contended that there are forces operating in our economy which tend to cause saving to exceed investment. Furthermore, if deliberate measures were not taken to increase the rate of investment, and thus close the gap between saving and investment, the national income would fall till savings were reduced to a figure equal to that of investment. Here we see that in the absence of increased investment, the adjustment will take place through a *fall in income*. This will lead to extensive and prolonged unemployment. It will be a state of equilibrium at less than full employment. So long as investment equals savings there is no reason why national income and the amount of employment should change, even if many people anxious for jobs were out of work. According to the classical economists, such a condition of affairs was unthinkable. Increased savings could not lead to unemployment. Rather the reverse, augmented savings resulting in lower interest rates would induce businessmen to borrow all available finance capital and hire labour. Again, as we have seen, labourers who refused to offer their services at the wages offered were "voluntarily" out of work. Jobs were always available at a wage, a wage largely determined by the amount of capital (savings) available for investment. The orthodox economists had no place in their thinking for equilibrium at less than full employment. But Keynes presented strong arguments in support of his position.

Propensity to Consume, Spending, and Saving.—It has been noted that the size of the national income depends upon the magnitude of expenditures on consumer goods and capital goods. We must now ask ourselves: what governs (1) the amount of money spent on consumption and (2) the quantity used for investment projects? The amount of spending on consumer goods at a given level of income is regulated by the *propensity to consume*. It is a well-known fact that the higher the income the smaller the proportion spent for consumption purposes. A person with a \$3,000 income may save 10 per cent of it (\$300), whereas if his income were raised to \$10,000 he would save perhaps 35 per cent of it (\$3,500). Thus it is evident that saving (or consumption) is a function of income. That is, there is a direct relation between the size of the income and the *percentage* saved; the higher the income

the greater the proportion saved. Or, from the viewpoint of expenditures, the higher the income the smaller the percentage spent on consumer goods. This tendency for the percentage of income spent on consumption goods to fall as income rises has an important bearing upon the size of the national income, hence upon the amount of employment.

The *propensity to consume* refers to the percentage of income which people would spend at a given income level. It is not a unique determinant of consumption because the size of the income itself affects the propensity to consume. Nevertheless, it follows that in so far as the propensity to consume diminishes as incomes increase, a smaller percentage of income will be spent on consumer goods (i.e. savings increase with rising incomes) and this in turn has a depressing effect upon national income in the succeeding period, unless counteracted by increased investment. Before turning to the factors which determine the amount of investment, we must understand clearly another concept, namely, the *marginal propensity to consume*. This term indicates the percentage of an increase in income that would be consumed. Specifically, the marginal propensity to consume is the proportion of a change in consumption to a given change in income. For example, if an increment of income amounted to \$300 and \$200 of this were spent on consumption, the marginal propensity to consume would be two-thirds ($200 \div 300$).

The Rate of Investment.—Since the proportion of income spent on consumer goods decreases as the absolute amount of income increases, there is a tendency for income itself to decline with the lapse of time (because $\text{income} = \text{consumption} + \text{investment}$). The way to avoid this is to stimulate the rate of investment as the rate of consumption decreases. But is there any reason to believe that the amount of investing by entrepreneurs will automatically respond to the quantity of funds which a society as a whole does not spend on consumption (i.e. saves)? The orthodox economists, as we have seen, would contend that all savings would be invested through the mechanism of an adjustment in the interest rate. The rate would tend to fall till *all* savings were invested. Keynes does not agree. In his view the rate of interest *may not* fall low enough to absorb all savings which individuals are able to accomplish under conditions of full employment (i.e. out of full employment income). Investment may fall short of the amount of saving. On what then does the amount of investment depend?

The amount of investment is governed by the view which businessmen take as regards the rate of return on new capital goods contrasted with the rate of interest they are compelled to pay for borrowed funds. Their estimate of return on capital goods is based on the "*anticipated earnings of new investment.*" This is called the *marginal efficiency of capital*. It is the important factor in determining the rate of investment from the demand side of the finance capital market. On the supply side, the quantity of funds available depends upon "*liquidity preference*"; that is, the desire to hold money idle rather than spend or lend it below a certain rate of interest. Keynes points out that there are three reasons why people may want to hold a fund of purchasing power idle: the transactions-motive, the precautionary-motive, and the speculative-motive.⁴ People desire a store of purchasing power for current transactions, for security reasons, and for the purpose of taking advantage of speculation opportunities. As a result, there is a rate of interest below which savers will not lend their funds. They prefer financial "liquidity" to a very low interest rate.

If the marginal efficiency of capital (the anticipated return on the basis of which entrepreneurs offer a given interest rate) is less than the rate below which potential lenders will not part with their savings, all savings will not be invested. For example, if the marginal efficiency of capital is 2 per cent and the liquidity preference rate is 2.5 per cent, funds will remain uninvested. As already noted, if savings exceed investment, income will decline and eventually saving will shrink until it again equals investment. When this point is reached there is economic equilibrium. But if labourers are out of work because entrepreneurs foresee no profit in borrowing savings to invest at the liquidity preference interest rate, it is equilibrium at less than full employment. Thus we see that, in contrast to the orthodox view, if the marginal efficiency of capital is less than the liquidity preference interest rate, all savings will not be invested and a condition of chronic unemployment results.

Changes in Rate of Investment, Income and Employment.—The tendency of the economic order to reach a state of equilibrium at less than full employment poses this question: How can full employment be achieved? The answer calls for further consideration of the relation between national income, saving, investment, and employment. We have seen how saving may exceed investment. Consumers may decide to spend less, i.e. save more, than

⁴Keynes, *General Theory*, p. 170.

formerly and unless greater investment is forthcoming to match increased saving, income in the next period will fall. But how can investment exceed saving? There are two possible means by which this can be done: (1) by spending funds formerly held idle (dis-
hoarding) and, (2) by borrowing from the banks when such borrowing results in an expansion of bank credit. In short, investment may exceed saving through "dis-
hoarding" or bank credit expansion. A study of the numerical illustration which follows will help one to understand the relation between an increase in investment relative to saving and the size of the national income. It is assumed that 60 per cent of income is spent and that investment remains at 50 in each period.

Period	Income	Consumption	Saving	Investment	Additional Money from Disharding or Bank Credit Expansion
1.	100	60	40	50	10
2.	110	66	44	50	6
3.	116	69.60	46.40	50	3.60
4.	119.60	71.76	47.84	50	2.16
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
x.	125	75	50	50	—

Since income in any one period equals consumption plus investment of the *previous* period, in our illustration it rose from 100 in Period 1 to 110 in Period 2, i.e. by the amount investment exceeded saving in the first period here shown. As consumption remains at 60 per cent of income, the absolute amount of saving increases, hence ever smaller sums of new money are required to keep investment at 50 in subsequent periods. Saving eventually catches up to investment; after which no additional new money is required to keep investment from falling.

The Multiplier.—A consideration of the above illustration suggests another phenomenon of significance, namely the relation between the excess of investment over saving and the amount of increase in income. The original increase of 10 would be spent first on new capital goods and thereby increase directly receipts of those engaged in the producer goods industry by 10. But this is not the end of the story. When labourers in industries producing

new capital goods receive their *additional* wages they spend part of same on consumption. This increases the incomes of workers in the consumer goods industries, who, in turn, spend part of their extra receipts on consumer goods produced by still other labourers and so on. The money is used several times to purchase goods and thus augment incomes. As a rule, however, each recipient does not spend *all* of his additional income on consumer goods; part is saved. Thus the addition to the incomes (of others) gets smaller each time the money is spent. But the *total* addition to incomes may be much larger than the original excess of investment over saving. In our illustration, the increase in income is 25 whereas investment originally exceeded saving by only 10. The number of times the ultimate increase in income (resulting from a given rise in investment) exceeds the given increase in investment is called the *Investment Multiplier*. It is the ratio of an increase in income to an increase in investment. In the above illustration, therefore, the multiplier is $25 \div 10 = 2.5$. From the preceding discussion it is evident that there is a close connection between the spending or saving habits of the people and the effect of the multiplier. In fact, the size of the multiplier is determined by the *marginal propensity to consume*; i.e. by the fraction of additional income which is spent on consumption.⁵

Propensity to Consume and Equality between Saving and Investment.—In the numerical illustration on page 517 it was assumed that the propensity to consume did not change with the size of the income. It remained at 60 per cent irrespective of the latter's size, hence saving was always 40 per cent of income. In so far as the propensity to consume weakens (i.e. a smaller proportion is spent on consumption) as income rises, the percentage saved increases with enhanced money receipts. How will this be reflected in the changing income? In other words, how will the weakening propensity to consume be registered in the effect of the multiplier? Let us look for the answer in the illustration on page 519, which shows the result of a falling percentage expenditure on consumption as income rises.

The figures show that a virtual equilibrium between saving and investment was achieved during the *third period* (cf. illustration on page 517). It is clear, therefore, that a weakening marginal propensity to consume as income rises rather drastically *diminishes*

⁵See Appendix III on the "Relation between Propensity to Consume and the Multiplier" at the end of this chapter.

the rate at which income increases. In this case income will rise only slightly above 114.89 as a result of impending equality between savings and investment, unless a new stimulus is provided. Conse-

Period	Income	Consumption	Saving		Investment	Additional Money from Disharding or Bank Credit Expansion
			Amount	Percentage of Income		
1.	100	60	40	40	50	10
2.	110	64.89	45.11	41	50	4.89
3.	114.89	65.49	49.40	43	50	.60

quently, it is apparent that the propensity to consume tends to retard the rate of increase in income when investment exceeds saving.

On the other hand, when savings are accumulating faster than investment is being made, and income, therefore, tends to fall, propensity to consume reduces the rate of income decline. This results from the fact that as incomes fall marginal propensity to consume becomes greater and people spend a larger proportion of their incomes on consumer goods. In the absence of outside influences such as an artificial stimulus to investment, equilibrium is re-established through a reduction in the rate of saving. Thus the multiplier effect is enhanced and incomes fall ever more slowly as time elapses.

Summarizing the effect of an altering marginal propensity to consume on income changes when there is disequilibrium between saving and investment, it may be said: (1) that when investment exceeds saving the rate of income increase is retarded and (2) when saving is greater than investment the rate of income decline is diminished. In the first case, equilibrium tends to be restored quickly through a proportional increase in saving; in the second case, through enhanced spending relative to income. In both instances, equilibrium between saving and spending is re-established sooner and the amount of rise or fall in income is *less* than otherwise would be the case.⁶

It is important to observe that the effect of an increase in investment upon income depends to a great extent on who gets the new money. If it falls into the hands of the poorer classes, who of

⁶See Weldon Welpling, *Money and Banking* (New York, 1947), chap. xxxiv.

necessity spend practically all of their monetary receipts, the effect on income will be great. Since members of the low-income groups are likely to use practically all of any increase in income for the purchasing of consumer goods, marginal propensity to consume and, hence the multiplier, will be large. Conversely, if the additional purchasing power first goes to the wealthy groups, by whom most of it will be saved, the influence upon income will be relatively small. Therefore, it will be seen that the distribution of income has a direct bearing on the marginal propensity to consume and the multiplier effect.

The Multiplier and the Acceleration Principle.—In the last chapter, it was pointed out that a given increase in demand for consumer goods might lead to a correspondingly larger demand for capital goods. This would certainly happen if the industries concerned were operating at full capacity before the increase in demand occurred. The phenomenon is known as the *acceleration principle*. We meet it again in the multiplier analysis. The original increase in investment relative to saving leads to greater expenditures on consumer goods which will result in greater expenditures on capital goods, particularly if the firms are operating at capacity. This results in a rise in investment above the initial increase. The multiplier will apply to this *secondary* rise in investment, thus leading to still greater expenditures on consumption. As a result there may be a *tertiary* increase in investment. In this also the multiplier comes into play. As a consequence of this process a very complicated chain of causation develops and expenditures on both consumption and investment are much larger than would have resulted from the effect of the multiplier on the initial increment of investment only.

By way of illustration in the figures presented on page 517 the investment increase above saving was 10 and the multiplier 2.5. Disregarding the possible acceleration effect, the rise in income would be $10 \times 2.5 = 25$. But suppose that the secondary, tertiary, "and so on" investment amounted to 20. Then the multiplier would apply not to 10 only, but to $10 + 20 = 30$. Consequently, the eventual total increase in income would be $30 \times 2.5 = 75$. It is evident, therefore, that the acceleration principle accentuates the effect of the multiplier.⁷ But there are counteracting tendencies.

⁷See L. Tarshis, *Elements of Economics* (Boston, 1947), pp. 410-12.

The Leakages.⁸—As we have seen, the extra money income to individuals resulting from new investment will be either spent or saved. Anything which tends to reduce the proportion spent (on either consumer or producer goods) diminishes the effect of the multiplier. If the new money is not spent by recipients, it does not become income to somebody else. If the money fails to materialize as income in the next round, it has *leaked out* of the income stream. What is the nature and source of possible leakages? The *hoarding of funds* (merely keeping purchasing power idle) is one type of leakage. The people who decide to hold money idle do not spend and, therefore, do not create incomes. *Repayment of debt* has a similar effect. Liquidating old indebtedness is *not* a net addition to incomes. It is merely the return of principal to the creditor, who may, of course, spend it; then additional income would be created. But the mere act of paying off an old debt in itself does not increase incomes. *Expenditures on goods produced abroad* are regarded as a leakage.⁹ This is because such spending increases the incomes of people living in other countries. In so far as exports are paid for eventually by imports, this particular kind of leakage is self-correcting. It has been suggested that the *amount of additional purchasing power which is absorbed by rising prices* rather than enhanced employment and real income might be regarded as a leakage. To the extent, at least, that rising prices cause business firms and individuals to keep larger bank balances, such additional idle purchasing power is not being used to generate incomes. Hence rising prices do result in money leaking out of the income stream. Again, the fact that the marginal propensity to consume weakens as incomes increase tends to result in the leakage of additional investment out of the income stream into savings.

"Saving Equals Investment."—In our discussion thus far we have considered the results of disequilibrium between saving and investment. In case of a divergence between these two factors, we have seen how equilibrium was re-established. If investment exceeded saving, income increased but so did saving till it eventually equalled investment. Conversely, if saving were greater than investment, income fell. But saving also decreased till it again became equal to investment. We also observed that propensity to consume caused income to increase at a diminishing rate when

⁸See George N. Halm, *Monetary Theory* (Philadelphia, 1942), chap. xviii.

⁹See Gottfried von Haberler, *Prosperity and Depression* (Geneva, 1941, 3rd ed.), chap. xiii.

investment exceeded saving, and to fall at a decreasing rate when saving was the larger.

But according to Keynes, there is a sense in which saving and investment are always equal.¹⁰ This, despite the fact that the saving may be done by one group in society and the investing by a different group (the entrepreneurs). The basis for this argument is that, in real terms, saving and investment are each equal to the excess of income over consumption; hence must be equal to one another. This may be expressed as follows:

Income = value of output = consumption + investment.

Income - consumption = saving.

Income - consumption = investment.

Therefore: saving = investment.

There is no objection to this concept so long as we are thinking in terms of *real* income, *real* saving, and *real* investment. It is true that what is not consumed out of the annual flow of goods is saved. It is also true that the excess of real income over consumption is investment; i.e. an addition to our stock of capital goods, hence real investment. Tersely stated, goods produced but not consumed in the current productive period are saved, and, since they constitute an addition to capital goods they also comprise investment. It is an identity, a passive concept which appears to have little or no significance as a basis for economic policy.

Expressed in monetary terms the assertion "saving equals investment" presents difficulties. Applied to any one income period, the statement is true by definition; since, according to Keynes, saving and investment are both equal to the difference between income and expenditure on consumption. This view is based on the fact that even when "new money" is spent on capital goods (i.e. invested) it immediately reappears as income to someone. Until the recipients of the "new money" spend the *extra* purchasing power, it is saved. Somebody always has the money. Hence, saving equals investment.

The question may now be asked: if saving equals investment, how can it be argued that "when saving exceeds investment, income falls"? The apparent contradiction can be explained by introducing the concept of successive time periods. Savings may now be regarded as the difference between income in the preceding period and expenditure on consumption in the current period. If some consumers in the current period attempt to save more than

¹⁰Keynes, *General Theory*, chap. vi, pp. 61-5.

they formerly did and there is no corresponding increase in investment, total expenditure on consumption and investment will decline, hence income will decrease. The fall in income will reduce the capacity of others to save. This process of adjustment (falling income) will continue till once more saving and investment are equal to one another. Thus while it is possible for an individual to save more by reducing consumption expenditure, in the absence of an offsetting investment rise there will be no increase in the total social saving. So far as society as a whole is concerned, the augmented savings of the individual have "run to waste."

As has been indicated, according to the Keynesian approach, a mere reduction in the purchasing of commodities by consumers (increased saving) would result during a given income period in greater investment since the unsold goods will remain in the hands of the entrepreneurs. The latter have an "investment" in the unsold goods equal to the reduction in consumer expenditures. This is a *passive* method of increasing investment. So long as inventories pile up as a result of a reduced rate of consumer expenditure, entrepreneurs cannot avoid "investing." But businessmen did not take the initiative. Conversely, if entrepreneurs borrow "new money" and use some to further the production of additional capital goods, the rest of the community is compelled to save. In this case the savers' role is passive. As has been pointed out,¹¹ from the viewpoint of economic activity and policy, it makes a great deal of difference whether the increase in real wealth (investing) resulted from a reduction in expenditures by consumers or from an increase in spending by entrepreneurs. In fact, measures adopted by central bank and government authorities in the first case (to avoid a slump) might well be the reverse of those followed in the second (to check a boom). Yet in the Keynesian analysis, investment has increased in *both* cases.

While the identity of savings and investment does not appear to be a very useful concept as a basis for economic policy, this approach does call attention to one significant point, namely, that an increase in saving by individuals may be highly undesirable from the viewpoint of the economy as a whole. Although income equals consumption plus investment, it does not necessarily follow that increased monetary saving will be matched by increased investment so that income will be maintained at its former level.

¹¹M. Curtis and H. Townshend, *Modern Money* (New York, 1938), chap. v, pp. 113-14.

Part of the increased effort to save *may be reflected in lower incomes*. Thus an economy campaign resulting in greater efforts to save may lead to reduced expenditures and smaller incomes. Since incomes are lower, others will be compelled to save less and the additional savings of those who reduced their expenditures on consumption, so far as the entire economy is concerned, have "run to waste." Hence the "save more" slogan may be economically unsound advice for the nation, especially at a time of impending slump in business activity.

Full Employment—How Can It Be Achieved?—From what has been said about income, savings, and investment, it is evident that the analysis has a direct bearing upon the problem of full employment. We have seen that conditions may obtain under which monetary saving may not be matched by investment. If the quantity of saving is 40 and the amount of investing only 30 (because the "marginal efficiency of capital" is less than the "liquidity preference" interest rate), savings amounting to 10 remain uninvested, then income will fall till the economic system reaches equilibrium at less than full employment. This assumes that an investment of more than 30 (e.g. 40) is required in order to employ the total labour force. How then is full employment to be achieved if entrepreneurs do not deem it profitable to borrow extra funds and therewith employ additional workers?

According to "Keynesian economics," the problem is to be solved mainly (1) by increasing the monetary supply through an expansion of bank credit, thus forcing a reduction of interest rates; and (2) by government spending. Reducing interest rates by action of the banking system will induce, or at least encourage, entrepreneurs to borrow and invest, thereby stimulating private industry. Low interest rates will also assist the government in its programme of additional expenditures on public works and similar ventures. The essential point in the approach is the role played by the government. If private enterprise does not invest enough to attain full employment, the government makes up the deficiency by investing in projects of its own. The amount of government investment above saving, of course, will be subject to the multiplier influence. The initial sum spent by the government will reappear, in part at least, as income in successive stages and the ultimate increase in income may be several times the original investment. On account of the multiplier and acceleration principles, it may not be necessary for the government to spend

huge sums in order to attain full employment. As incomes rise and total spending increases, private enterprise finds an incentive to expand operations. This policy of attempting to effect a business recovery through government spending has been called "pump priming."

The government might go beyond mere pump priming. It could adopt a compensatory spending policy. That is, increase its outlays more or less in step with the decline in private spending. These augmented government outlays might be on an intensive public works programme, more generous and comprehensive social security benefits, or on a combination of the two. The funds would be raised by borrowing from the banking system, thus avoiding heavier taxation to finance the increased expenditures. In fact by actually lowering taxes the government could leave a greater amount of purchasing power in the hands of individuals and thus encourage more private spending. Such fiscal measures (spending, borrowing, and taxation) would necessitate an appropriate monetary policy.¹²

Multiplier Analysis, Government Spending, and Private Investment.—If increased investment (spending on new capital goods) led to enhanced incomes as a result of the multiplier, there would be no valid argument against government borrowing from the banks and spending the funds on public works during periods of less than full employment. Additional public investment of this character would raise incomes, thus leading to greater expenditure on consumer goods and reduced unemployment. But there is no guarantee that government spending on a pump priming scale will be effective. Much depends upon the attitude of entrepreneurs as a group to the government's programme.

We have seen how funds spent at one stage in the economic process *may not appear* as income during the next stage. As a result of "leakages" the amount received as income tends to diminish at each successive step. Some of the money is saved on each round. The quantity "caught up" in savings largely determines the success or failure of the government's pump priming programme. If practically all of the money is spent or reinvested, business and employment will be stimulated. On the other hand, if a large portion is saved, particularly in the early stages, the multiplier effect will be sharply diminished and very little increase in employment will occur. It is important, therefore, that the

¹²See below, "Public Debts and Fiscal Policy," chap. XXXII.

government attempt to get the new funds into the hands of the people who will spend them, that is, the low income groups.

But sooner or later the new money will find its way into the hands of entrepreneurs. Whether they spend (or reinvest) or save is largely determined by their view as to the success or failure of the government's policy. If, in the opinion of businessmen, government spending is merely a temporary expedient, a mere stopgap, they may refrain from spending the sums on capital goods which they would have spent in the absence of pump priming. Thus government investment may only replace private investment. Should the government's policy actually cause a decline in private investment greater than the amount of new government spending, the multiplier "may work in reverse."¹⁸ Under the latter circumstances unemployment would be accentuated. This criticism was directed against the "public works" recovery programme of the United States government during the "thirties."

Persistent spending on a large scale by public authority is much more likely to induce private investment than any half-hearted programme. Government expenditures for war purposes apparently do not discourage investment by entrepreneurs. In fact, measures usually have to be adopted to curb private investment which is detrimental, or at least not conducive, to the war effort. Whereas the effect of the pump priming policy of the depression period was disappointing, the vast governmental expenditures during World War II soon resulted in a condition of full employment. It has been suggested that public spending on a similar scale during the "thirties" would have brought about recovery. The argument involves the idea that if entrepreneurs had been convinced that the government was determined to spend on a large scale so long as business was depressed, they would not have refrained from investing in private ventures. The problem of government expenditures will be discussed further in the chapter on "Public Finance."

National Income, Savings, Investment, and the Business Cycle.—From the material presented in this chapter, it is evident that the problem of maintaining the size of the national income at a state of full employment through the preservation of equality between saving and investing has an important bearing upon the problem of the business cycle. Regardless of the initial cause (or causes) of a business recession, whether it be lack of confidence,

¹⁸Albert L. Meyers, *Modern Economic Problems* (New York, 1939), chap. iv, p. 71.

rising costs relative to prices, "out of line" development, or some other factor, the downward pressure upon prices and production can be overcome by appropriate measures designed to stimulate investment so that net income will be augmented through the multiplier and acceleration effect. Thus instead of attempting to readjust *particular* costs and prices which may be out of line, we have an aggregate demand approach to the problem. Instead of trying to rearrange specific elements in the cost-price structure, e.g. scaling down costs by lowering wages and interest rates, the solution is to be found in increasing (or, at least, maintaining) the purchasing power, or aggregate demand, for goods and services. In an economy which has become very inflexible (through monopoly control and practice in the commodity, labour, and capital markets, many prices and costs tend to be very rigid), this method has a marked advantage over the particular cost-price approach.

The Mature Economy.—It has been noted that the severity and duration of the Great Depression caused some "authorities" to conclude that we were faced not with the recession of an ordinary business cycle but with the *secular stagnation*. The proponents of this school of thought, among them supporters of Keynesian economics, contended that the nations faced a condition of chronic unemployment. Out of this view, or along with it, there has been developed the theory of the *mature economy*.¹⁴

Adherents of the mature economy school set forth several reasons why investment opportunities for private enterprise have not kept, and are not likely to keep, pace with the amount of saving incident to a high national income. Briefly the reasons are as follows: first, *the rate of population growth is declining*. According to the findings of demographers, western nations are facing a downward trend in population growth and before the end of the present century will have stationary, or even declining, populations. The mere fact of a reduction in the rate of population increase diminishes the opportunities for private investment. The demand for food, clothing, shelter, and other facilities tends to expand ever more slowly as time elapses. With a high level of national income, ability to save is not being matched by investment outlets. Population growth in Canada since 1871 is shown in the table on page 528.

The data in this table show that the rate of population growth in Canada since 1871 has been irregular. It declined

¹⁴See Alvin H. Hansen *Fiscal Policy and Business Cycles* (New York, 1941).

between 1871 and 1901, but rose rapidly during the first ten years of the present century. This was the decade of most rapid increase, namely, 34 per cent. Thereafter the rate fell steadily, being only

TABLE XXX
POPULATION IN CANADA*
(In thousands)

Year	Population	Increase	Percentage Increase
1871	3,689		
1881	4,325	636	17
1891	4,833	508	12
1901	5,371	538	11
1911	7,207	1,836	34 } 60
1921	8,788	1,581	21
1931	10,377	1,489	17
1941	11,507	1,130	11
....
....	....	....	.... } 27
....
1971†	14,606	3,099	...

*Source: Dominion Bureau of Statistics, *Canada Year Book*, 1946, p. 94.

†Population projection, see W. Burton Hurd, "Demographic Trends in Canada" (*Annals of the American Academy of Political and Social Science*, Sept., 1947, p. 15).

11 per cent in the "thirties." According to one estimate the population of Canada in 1971 will be in the neighbourhood of 14,606,000 people. This projection is based, of course, on present trends. Large waves of immigration (or emigration) would give an entirely different result. If this forecast is correct, the population of the Dominion will grow by only 27 per cent between 1941 and 1971, whereas during the thirty years prior to 1941 the increase was 60 per cent. Apart from possible large-scale immigration not counterbalanced by emigration, it looks as though the rate of population growth in Canada is definitely slowing up. This phenomenon is also very striking in the United States.

The second factor tending to restrict investment outlets is the *disappearance of the frontier*. When business slows up and jobs get scarce in the cities, it is no longer possible (at least, much more difficult) for people to leave the urban centres and establish new communities on virgin territory. The frontier has disappeared. The development of "new communities" afforded opportunities for

additional investment. Houses had to be built, stores erected, and transportation facilities constructed, to name only a few requirements. The frontier disappeared in the United States as early as the "nineties." Thus the economic "safety valve" no longer existed in the American economy. So far as Canada with her "wide open spaces" is concerned, it may seem ludicrous to contend that the frontier is a thing of the past. In this connection one must remember that unoccupied territory does not necessarily mean that settlement thereon is economically feasible. It has been estimated that "there are something between 27,000,000 and 29,000,000 acres of unused, reasonably accessible land which are regarded as physically suitable for agricultural settlement" in this country.¹⁵ But in view of Canada's dependence upon foreign markets, the "frontier," regardless of geographic area, tends to fluctuate with the volume of exports. It is not likely that we shall see another expansion on the frontier such as occurred with the settlement of the prairie region during the first decade of the present century. It is, of course, dangerous to prophesy in this as in other human affairs. But in the absence of technical developments tantamount to a "new industrial revolution," the prospect of a rapid and even sustained growth of population in Canada seems to be remote. In any case, the spatial and economic frontiers do not coincide.

The third reason for the slowing down of the rate of investment relative to saving is a *dearth of new industries* necessitating huge capital expenditures. For example, canal building in the first half and railroad construction in the second half of the nineteenth century provided outlets for large-scale private investment. The automotive industry played a similar role in the first three decades of the twentieth century. It is difficult to see how another trans-continental railway would be economically profitable to Canada, hence further expansion in this field under private auspices will be relatively small. Highway building will replace railway construction to some extent, but there is a limit to this type of endeavour. We cannot go on indefinitely covering the country with ribbons of concrete. Anyhow this will be a matter of public, not private, investment. The argument that a dearth of new inventions in the future will restrict the opportunities for private capital investment is a thesis of doubtful validity. It is impossible

¹⁵W. Burton Hurd, "Demographic Trends in Canada" (*Annals of the American Academy of Political and Social Science*, Sept., 1947, p. 14).

to forecast with any degree of certainty the course of development with respect to technical innovations and consequent capital requirements. It may well be that a whole series of new inventions will necessitate a vast volume of investment. In fact the disappearance of the "extensive" (land) frontier may be offset by a development of the "intensive" frontier; i.e. by new industries which will create additional investment opportunities. But in the absence of such innovations, it will be necessary for the government to spend (i.e. invest) large sums if full employment is to be achieved.

The fourth reason submitted is that industries increasingly finance their capital requirements from depreciation reserves. Hence there is a declining demand for new investment.¹⁶

Summary.—The problem of full employment, or "the avoidance of mass unemployment," is of comparatively recent origin. This does not mean, of course, that there were no protracted periods of unemployment in the past. There were, but the condition apparently tended to correct itself. Consequently the orthodox economists had no place in their thinking for chronic unemployment. According to the Keynesian approach, in contrast, there may be a deficiency in aggregate demand for goods and the economic system may be in equilibrium at a state of less than full employment. This because the increased rate of saving (on account of weakening propensity to consume) which accompanies rising incomes is not matched by a corresponding rate of investment. If the marginal efficiency of capital were less than the liquidity preference interest rate, not all savings would be invested, consequently incomes would fall and savings decline till they again equalled investment. This new equilibrium at a lower income level would not be commensurate with full employment. In the absence of other stimuli, it may be necessary for the government to borrow and spend on

¹⁶Strong objections can be raised to the "economic maturity" doctrine. Some of these are: (1) great economic expansion took place in the United States between 1850 and 1930 despite the fact that (a) the rate of population growth has been declining since at least 1860 and (b) the United States frontier virtually disappeared in the 1890's; (2) the uncertainty regarding future technological developments requiring great capital investment; (3) the fact that corporation finance by means of depreciation reserves does not preclude, or even reduce, opportunities for the investment of private savings. Large corporations which follow a policy of "internal" financing through their demand for the products of other concerns actually provide investment outlets for private savings in various phases of industry.

public works and similar projects if full employment is to be achieved. The amount of income generated in all probability will be greater than the initial expenditures on account of the multiplier and acceleration principle. Although there are counteracting tendencies, sustained government spending on a large scale will increase monetary incomes, thus enhancing aggregate demand and promoting full employment. Business cycles can be levelled out if investment is kept equal to saving on a plane sufficient to "avoid mass unemployment." Those who subscribe to the mature economy doctrine contend that advanced countries are faced with a relative decline in private investment opportunities (hence secular unemployment) on account of the fall in population growth rate, disappearance of the frontier, dearth of new industries, and the financing of capital requirements from depreciation reserves. On the assumption that the mature economy view is correct, the government will be compelled to step in and fill the gap resulting from insufficient private investment in order to insure a condition of full employment. This would necessitate continuous public investment. But there are strong objections to the mature economy doctrine.

APPENDIX III

RELATION BETWEEN PROPENSITY TO CONSUME AND THE MULTIPLIER

If the increase in income is Y , and the increase in consumption is C ; then the marginal propensity to consume is $\Delta C/\Delta Y$. Let m equal the multiplier and let k equal the marginal propensity to consume (i.e., $k = \Delta C/\Delta Y$), then the relation between the marginal propensity to consume and the multiplier is given by the equation¹

$$m = \frac{1}{1-k}$$

From the equation it is evident that if the marginal propensity to consume is low, the multiplier will be small and *vice versa*. For instance if the increment of investment were entirely saved (i.e. when $k = 0$) the multiplier would be unity. In this case the rise in income would be the same as the increase in investment. At the other extreme, if the entire increment of investment were spent on consumer goods (i.e. when $k = 1$) the multiplier would be infinitely large. The rise in income under such circumstances would be phenomenal. In so far as people do not spend all of their increased income, such a result ordinarily does not come within the sphere of economic reality. Yet something of this nature did occur in Germany after World

War I during the period of hyper-inflation when income receivers rushed to buy something as soon as possible in order to escape the consequences of further depreciation of their money holdings.²

In all practical cases the multiplier is assumed to have the following characteristics:

- (a) It is positive.
- (b) It is > 1 .
- (c) It diminishes as income increases.

The multiplier is a useful tool of analysis in that under particular circumstances it indicates how much the national income will rise with a given increase in investment ($\Delta I \times m = \Delta Y$). Referring again to the numerical illustration on page 517 the increase in investment $\Delta I = 10$, and the multiplier 2.5, hence the increase in investment equals $10 \times 2.5 = 25$. But this holds true only if the increase in investment is maintained (at 50 in our illustration) and the propensity to consume does not change.

¹Derivation of formula:

$$k = \Delta C / \Delta Y$$

$$m = \Delta Y / \Delta I \text{ (where } \Delta I \text{ is an increment in investment)}$$

$$\Delta I = \Delta Y - \Delta C$$

$$\therefore m = \frac{\Delta Y}{\Delta Y - \Delta C} = \frac{1}{1 - \Delta C / \Delta Y} = \frac{1}{1 - k}.$$

²See Tarshis, *Elements of Economics*, p. 418.

CHAPTER XXVIII

PERSONAL DISTRIBUTION AND INEQUALITY

INTRODUCTION.—We have already indicated (p. 300) how personal distribution is linked with functional distribution and have suggested that an understanding of the former requires in addition to a study of prices an appreciation of the role of various economic institutions that constitute the background for the pricing process. This chapter proposes to enter that field of enquiry. The first pages lay down in broad outline the actual conditions of inequality having reference both to wealth and income. Thereafter comes an attempt to deal with its outstanding economic and social effects and to distinguish and estimate the various forces that contribute to its making. The reader will be interested in considering how far it should be attributed to personal and how far to social causes: to what degree it is a matter of biological or attitudinal differences, as contrasted with institutional factors and particular types of legislation or taxation. The last half of the chapter enters the realm of applied economics in offering certain suggestions for remedy.

Before passing to these matters, however, it will be well to stress again the close relation between distribution and other parts of the system, and to point out how much of the difficulty with the wholesome and regular functioning of the productive organization, as well as with our standards of consumption, rises out of the conditions of distribution.

The Facts about Inequality: (1) Personal Inequalities of Wealth Ownership.—Dr. W. I. King, describing the situation for the United States in 1927, divides the people into three classes: the rich, the poor, and the middle class.¹ The "rich" owning \$50,000 or more of wealth and numbering 2 per cent of the people own 40 per cent of the total wealth of the country. The "middle class," owning from \$3,500 to \$50,000 of wealth and numbering 33 per cent of the population, own 45 per cent of the wealth. The "poor," owning less than \$3,500 and accounting for 65 per cent of the people, own only 15 per cent of the wealth.

¹W. I. King, "Wealth Distribution in Continental United States" (*Journal of the American Statistical Association*, vol. XXII, June, 1927).

As a matter of fact, it seems that a majority of the population in the advanced industrial nations is virtually property-less. Upwards of half the people in Britain, the United States, and Germany are without ownership of any considerable property. Only a negligible number of wage-earners in our great cities own their own homes. In these modern industrial countries wherein 2 or 3 per cent of the people own as much wealth as all the rest taken together, it follows that the bulk of the income from owning as contrasted with income from doing goes to a small fraction of the population. The income of the less favoured half is almost entirely an income for effort, mental and physical. In the United States a single fortune was estimated in 1915 to equal the total claims to wealth of 2½ millions of those at the lower end of the scale. Truly this is a condition making for class division between the "haves" and the "have-nots."²

(2) **Personal Inequalities of Income.**—In the United Kingdom, according to Professor L. D. Edie, "pre-war estimates allotted one-half of the total income of the nation to about 12 per cent of the people, and one-third of the total income to 3 per cent of the population."³ By the middle 1930's one-half was going to 10 per cent.⁴ For the United States the situation in 1929 is revealed by the following figures:⁵

TABLE XXXI
PERCENTAGE DISTRIBUTION OF ALL PERSONAL INCOMES IN THE
UNITED STATES, 1929

Percentage of individuals	Income class	Percentage of income
39.8	Under \$1,000	12.48
41.0	\$1,000–\$2,000	30.85
10.9	\$2,000–\$3,000	13.63
3.2	\$3,000–\$4,000	5.78
1.5	\$4,000–\$5,000	3.43
2.3	\$5,000–\$6,000	8.27
1.25	\$10,000–\$100,000	14.86
0.05	Over \$100,000	10.65
100.00		100.00

²The reader will understand that inequalities in consumers' wealth and inequalities in capital goods will be different in their effect. Separate figures, however, are not at hand.

³L. D. Edie, *Economics: Principles and Problems* (New York, 1926), p. 447.

⁴Colin Clark, *National Income and Outlay* (London, 1937), p. 4.

⁵Adapted from M. Leven, H. G. Moulton, and C. A. Warburton, *America's Capacity to Consume* (Washington, 1934), p. 207. See also p. 54 for percentage distribution of family incomes.

Examination of Table xxxi will show that while income distribution is not as unequal as that of property, the disparities nevertheless are very great. It is evident that half the income in that year went to the richest 12 per cent of the gainfully occupied people, and that the richest 8 per cent of the people got approximately the same as the poorest 80 per cent. Speaking in terms of actual dollars, we note that 80 per cent received less than \$2,000 during the year and 40 per cent got less than \$1,000. At the other end of the scale one-half of 1 per cent of the people enjoyed incomes of \$100,000 and upwards, and came into possession of more than 10 per cent of the national income; 1.3 per cent of the people receiving incomes of \$10,000 and over took 25 per cent of the nation's income.

In assessing these figures it is well to associate them with the figures of wealth ownership mentioned above. The incomes of the large property holders make up a huge share of the total income of the nation and the inequalities existing between those who possess capital wealth and those who do not constitute the most challenging element in the whole picture. For the lowly classes practically the whole income is derived from personal effort. According to Dr. Edie, "approximately one-half of the incomes between \$3,000 and \$4,000 arises from personal services, the other half from ownership. When incomes reach the \$10,000 figures the share due to personal service is reduced to one-fourth, whereas the share due to owning rises to about three-fourths. When incomes reach the figures that rank the receivers as millionaires, the share due to personal services falls to about 14 per cent. When incomes pass the \$1,000,000 mark annually, the share for personal services declines to a trifle over 4 per cent."⁶ "Obviously," he adds, "the higher the income, the lower the proportion due to personal services, the greater the proportion due to ownership."

Statistics on this subject are necessarily taken from foreign countries. Unfortunately, studies of Canada developed from this point of view are lacking. The best we have are those compiled from income tax reports and needless to say these only reveal the distribution of incomes above the exemption figure. Altogether the proportion of high incomes is much lower than in the United States. Contrasting with the 25 per cent of the total national income in that country going to persons receiving \$10,000 or more in 1929, Canada showed only 7 per cent of the national income going to the same

⁶*Ibid.*, p. 448. Doubtless these estimates should be amended somewhat on account of the changed value of the dollar.

groups in 1930-1 and 5 per cent in 1935-6. Only 217,049 people, representing about 8 per cent of the families in Canada, were taxable in the latter year and only 25,466 persons, representing about 1 per cent of all families, reported an income of \$5,000 or more. That Canada is not without its problem of inequality is shown by the fact, however, that 300 persons each receiving \$50,000 or over paid one-third of the nation's whole income tax revenue of the year.⁷

Comparisons such as the above between average incomes of differentiated groups fail to reveal all that is vital in income differences. Personal inequality is in no small degree a matter of differing size of families. A recent study by the Dominion Bureau of Statistics (on family expenditures) found that among 1,135 British wage-earning families of like status the average income per person dropped from \$464 where there was one child to \$197 where there were five.

Another significant aspect is regularity. Canadian farm income in some sections, for instance, depending as it does on particular crops and their marketings and prices, is notoriously uneven as contrasted with other sections. Gross cash income from sales in Saskatchewan in 1931 was less than 24 per cent of the gross income of 1926 and during the whole period of the thirties has averaged less than 35 per cent of the average of 1926-8; whereas the coefficient of variation for Ontario and Quebec is only 40 per cent as high.⁸

Is Inequality Increasing?—Positive answer to this may not be given. The statement, "The rich are getting richer but the poor are not getting poorer," was doubtless true of the 1920's but cannot be accepted for the more recent period for Canada. Recent statistical studies in Great Britain finding that real wages there had increased faster than per capita income from 1911 to 1934 have been quoted to support this statement, but as evidence of lessening inequality they are of doubtful worth since they refer to full-time weekly wages.⁹

Is Inequality Necessary?—The picture, then, is one of great inequality in Great Britain and the United States and apparently a lesser inequality for Canada. Without referring to conditions of the depressed years with all their unemployment and thousands on

⁷See *Canada Year Book*, 1938, p. 894.

⁸See J. B. Rutherford, "Agricultural Income" (*Canadian Journal of Economics and Political Science*, vol. IV, Aug., 1938).

⁹See review of A. L. Bowley's *Wages and Income in the United Kingdom since 1860*, in *American Economic Review*, vol. XXVIII, Sept., 1938, p. 626.

relief, we find in the prosperous years just examined poverty as the lot of millions at one end of the scale and opulence for a limited group at the other. The question rises naturally, "In view of the wealth that we have is poverty necessary? Have we enough income for all to live well? Would a closer approach to equality operate to lessen national income in the future?"

Rough mathematical computations we must admit are crude and inadequate for a matter of this kind. People who live in families can live more cheaply at the same standard of consumption than an equal number living singly. Age conditions bear upon the matter, and so does the proportion of urban to rural living. Nevertheless it is pertinent to ask how far the present national income would go if equally distributed. Taking $9\frac{1}{2}$ billions as our net national income at the present time and $12\frac{1}{2}$ million as our population, by division we have \$760 as the amount available for each person (man, woman, and child). Assuming the average family to have four members, we should have on the basis of complete equality \$3,040 for each family. The American average for the same sized family would be approximately \$4,700 (1945).

Obviously we are not wealthy enough at the present time to be opulent. We have enough income, on the other hand, to be free from poverty. All this, of course, takes no account of the effect of a lessened inequality upon consumption requirements nor of its bearing upon production possibilities.

Effects of Inequality: (1) Biological and Social.—With this question of practical possibilities disposed of, we are ready to apply ourselves to examining just what the effects of our present inequality are. Inevitably into this study there must intrude a considerable degree of evaluation.

In the first place, we are confronted with a body of opinion rather widely held that there is a biological case for inequality. Competition is the means through which the population sorts itself. The better and the sturdier elements come to the top and survive. The weaker strains drop down into poverty and lessen in their proportion to the total, or at least are prevented from increasing their proportion, and so the stock is maintained. Inequality is a means to the survival of the fittest.

Allied to this though not stressing so much the thought of blood survival is the idea that it is well for society that there should be a dominant group. From the standpoint of art, education, and political and economic advancement there should be an élite. This

group is necessary for the discovery and promotion of values. We need our Carnegies, Rockefellers, and Strathconas, our Nuffields and Taylors to contribute financial foundations for worthy causes and give leadership to political and social life. These élite should not be selected necessarily on a basis of blood. Many of them may rise from the ranks. The condition of inequality nevertheless is necessary to their existence. Their functioning depends upon large personal income and power. Not the least of these, of course, are the powerful leaders of industry who pronounce upon entrepreneurial possibilities, sway the direction of investment, and make the best use of resources.

The above we believe to be the accepted attitude of a large part of our people toward wealth and inequality, differing, however, from group to group as to the emphasis that they place on leadership of different phases of life. The answer to it is neither an endorsement nor a refusal. As a philosophy it "has its parts." But, referring first to the biological argument, a study of population trends reveals that the wealthiest elements do not survive nor do the poor classes die out. Differential birth-rates more than undo all that differential death-rates accomplish. For purposes of social living, furthermore, human life is a matter of many parts and it is a question if the wealthy represent the best grouping of excellences and the poor the worst. Inequality cannot be defended as a means to racial improvement.

And referring to the more general attitude, the same line of criticism immediately suggests itself. Are these people, who in the fortuitous circumstances of modern economic life find themselves in possession of great wealth, the ones who are best fitted to use wealth well in the promotion of worthy causes? If we admit the merit of Carnegie libraries are we as ready to eulogize the horse racing cult? Or *vice versa*? The question is, "Should we accept this as the best way for directing the destinies of our culture or would we be better advised to look toward democratic discovery of consumption values and their promotion according to the judgment of the majority?" Many will contend that a continuing condition of inequality gets the emphasis in social development all wrong. Certainly it is out of line and in opposition to our pretensions of political self-government.

Let us remind ourselves furthermore that the welfare of society is more than a problem of leadership. Poverty, in the main, is bad. It denies expression of ambition; it lessens enjoyment; it shortens

the life span; it exploits childhood and undermines health. At the other end of the scale where affluence reigns, if we allow for some notable exceptions, there seems little to redeem the losses sustained by the lowly. There is much in the lives of the rich that leads to the moral degradation of youth and to the failure of the mature to attain to satisfactory living. Wholesome conditions, it is steadily maintained by observers, are found in the middle classes.

(2) **Economic Effects.**—Considering the effects of inequality purely from the economic angle, we have to note its influence upon both production and consumption. As a pure consumption proposition it is apparent that gross inequality means loss. From the principle of diminishing utility we learned that the first units of a commodity yield more satisfaction to the consumer than subsequent units. In a society consisting of a few rich and many poor, it is evident that first units of many goods would be denied to the masses whereas the rich would be carrying consumption of the same goods to the point of satiety. While it is not mathematically demonstrable that this means social loss (since different people vary in their capacity for enjoyment), practically we know from observation and experience that total utility is less than where there is comparative equality. Furthermore, in a society of more even incomes, the type of goods produced would be in line with normal human wants rather than running to extravagances. Again in a society where the less wealthy classes no longer accede graciously to their lower incomes, but live in the presence of a sense of wrong and social injury done them, the loss of satisfaction due to this mental state is very real though not susceptible to measurement.

From the standpoint of production one hears the case made both for and against inequality. For the *pros* it is argued that men are stimulated to give their best brains and energies by the hope of the high rewards that go with inequality; that men of vision should command great resources in the interest of us all; that inequality is necessary to capital accumulation which in turn is necessary for continuing production. For the other side it is contended that motivation would be more general and in the total greater if inequalities were reduced; that a vast amount of unrest and ill-will would disappear; that capital accumulation is assured by corporate and other devices (in any case it is a function of the interest rate); and finally that industry would be steadier and less susceptible to depression because the demand for necessities and comforts is more de-

pendable than demand for luxuries and faddish goods. Speculation, too, would hold a smaller place in a more equal society.

To the authors, while it would seem that truth lurks everywhere among these contentions, the better of the argument rests with those who press for greater equality.¹⁰

Causes of Inequality: (1) Personal Differences.—The causes of inequality are varied in type. Some are associated with the nature and functioning of particular institutions (our institution of inheritance for example). Some are connected with the general workings of our economic order. Still others have to do with individual differences.

¹⁰Something should be said about the ethics of the matter. Much of our inequality today rests upon circumstances of birth. Some are children of privilege. Others are born to grow up in poverty. There is little in modern thought to condone this condition. Our preachments and our fundamental philosophy are opposed to it. We stand rather for equality of opportunity. Gross inequality in inheritance especially means the blunt denial of the latter ideal.

Broader than the question of mere inheritance again is the distinction between earned and unearned wealth. Many persons, born to little in the way of economic goods, acquire them in vast amounts through no great exertion of their own. They may do so through mere chance, through fortunate speculation, but in any case usually by virtue of the possibilities that lie in our economic institutions. The point is, "If they have not laboured, and if they have contributed little to economic welfare, are they rightfully entitled to it?"

Furthermore, even on the basis of winnings through personal effort is it just that one man should receive \$50,000 a year while another, straining his muscles and his nervous organization just as hard, should get only \$1,000? Is it because of native ability that such differences exist? If so, let it be said that neither of these men had any control over his ancestry. Is it due to education and the general circumstances of environment? If so, there may be considerable to be said for the higher income man. He may have striven harder to prepare himself for high position. He may have denied himself marriage through the years of early maturity or gone through college on inadequate funds. On the other hand, he may have been more unscrupulous in wedging in and advancing himself at the expense of rivals. In the majority of cases it is probably true that people as individuals are not largely responsible for their superiority if they are superior or for their inferiority if they are weak. Take the case of the great prize fighter to cite an extreme example. With 5 per cent less fistic strength he would be getting possibly \$100 a month. As it is he takes \$300,000 from a single fight. By brawn and by temperament he is fitted to be a great fighter. Transportation, communication, and the organization of our athletic life and our betting do the rest. Similarly the executives standing at the helm of great industrial and mercantile corporations are "built up" by the totality of our economic and social life. And the great mass of men labouring on for their eight hours or their nine hours per day are what they are and remunerated as they are because of the whole social set-up.

Consider the last named. Many people stress the difference in capacity of people based on birth. Even as people vary in muscular strength and in outward appearance so likewise they differ in mental ability, in physical vitality, and emotional stability or buoyancy, essential to economic success. Proof of this, if proof is necessary, comes from the mental testing of psychologists who profess to find great differences in the intelligence quotients of school children and of such adult groups as they have examined. Sir Francis Galton, British biometrist, proved (to his own satisfaction at least) that ability runs in families.

There is no doubt that differences in native capacity do exist. There is no doubt also that there are different types of capacity or native predispositions to do well along certain lines. A person with the qualities necessary to become a great musician frequently lacks those which make for wealth accumulation. There is reason to think that persons endowed with a particular complex of attributes are most likely, other things being equal, to achieve high incomes in business.

The contest for incomes occurs, however, chiefly during maturity. It comes after environmental influences have had abundant opportunity to claim the interest of the active mind. Business studies used as the core of secondary education, for instance, as contrasted with Arts or Science will doubtless tend to build life's interest and ambition around wealth achievement. Where the wealth interest is prominent in the home life again as contrasted with, let us say, religious or political or sentimental interests, the children develop rapidly toward the making of incomes. The boy who is encouraged to buy a paper route or to take up part-time work in a store, or to market products of his own from his father's farm, will tend to become business-minded even though he has no exceptional native capacity for it.

Differences in incomes from service, therefore, as distinguished from property incomes are in considerable measure due to individual differences. Native special qualities such as judicial-mindedness, emotional steadiness, a liking for calculation, social confidence, photographic distinctiveness,—these rather than any superior general capacity as measured by academic performance frequently contribute to high incomes. But favourable early environment, including sufficient general education, contacts calculated to stimulate the business interest, and also contacts that pave the way to good opportunity when preparatory stages are finished, are usually

just as important. One of the authors once heard an observer remark—one who had travelled a good part of his life carrying on commercial dealings with farmers—that in his experience he had noticed that the ablest men on the average were found on the large farms. While this may be true, it is an unwarranted generalization to assume that the cause of differences in property incomes lies largely in personal differences.

The whole relation is almost too complex to assess. Incomes coming through inheritance cannot be thus accounted for so far as present recipients are concerned. Those coming from interest and dividends may be associated with qualities of thrift and astuteness in selecting investment possibilities though they are often a result of chance and of having been blessed with health in the family and few children. Large entrepreneurial incomes usually suggest courage, foresight, and special knowledge relating to the particular industry, or they may be due largely to unscrupulousness in corporate dealing.

(2) **Property and Inheritance.**—It is appropriate in any study of this matter to call special attention to the fundamental institutions of property and inheritance. Long before the Industrial Revolution and even before there was a contract system of wages these played their important part, making for an equal or an unequal society as the case might be. Property, of course, works behind and through later institutional forms such as the corporation. In a sense the latter are merely new legal devices for conveying and distributing ownership. They are new variants in other words, developments within the older institution. The whole institution of property is much broader, however, than they. It contributes to inequality through them, but also in very substantial degree exclusive of them. A very notable illustration of the latter has been in the past the ownership of land. Many of the greatest fortunes on this continent have been made on the basis of land-holding, especially in and around growing towns and cities. The increase, as we have noted earlier, may have been accompanied by very little personal contribution, but has resulted simply from the advance in population and development of community purchasing power. It represents a type of personal gain which moves swiftly toward social inequality largely because it contributes nothing to the wealth of others as it advances the property of the particular owner. This strand of inequality is associated especially with growing communities where the value of land is increasing. The

fortune once laid continues to stand secure, however, on the basis of subsequent rents, provided it is undisturbed. This unearned increment as it is called is not confined to land in the narrower sense. It takes in all natural resources. The inventor furthermore plays into the hand of him who owns natural resources. Some of the greatest new incomes of today have their source in oil fields, as contrasted with the older fortunes based on coal, lumber, and real estate. The unearned increment, furthermore, is not limited by any means to natural resources. Permanent buildings of various kinds have risen in value as well as landed real estate as towns have grown, railways and pavements have come, and industries quite unforeseen have developed. Oil fortunes have been made on the basis of exclusive contracts with holders of the crude petroleum when there was little idea of the dimensions to which the trade would attain. We must not, however, think of all incomes from property as unearned in the sense of representing no contribution and no striving. Good planning of industry usually (and in a competitive society, always) brings social as well as private gains; and frequently he who now draws a property income does so because he has wrought better than others of his kind.

Inheritance in the modern day, in a manner different from earlier times, tends to increase inequality. Largely it acts to perpetuate inequality rather than to increase it in the first instance. Many criticize our system of inheritance in that it gives propertied income to those who have made little or no contribution and who are not likely to handle well the productive source on which the income rests. They point out also that these propertied people of the second generation frequently have so little appreciation of the proper uses of wealth that the income itself is largely wasted upon them. We have here a deep question of social values. Doubtless our inheritance institution does express a philosophy reminiscent of a society where the family institution was wider in its functioning than it is today. The estate which passed was, a few generations ago, the productive unit upon which the whole family laboured. The members to whom it passed had served their time in gathering it. They normally were capable of carrying it on as a productive unit. In the urban situation today this is no longer true. Estates frequently consist largely in intangibles, claims to the earnings of far-flung factories, mines, and railways. The family nevertheless persists as a locus of sentiments. It is still the institution representing blood continuity, and in some degree culture continuity.

Naturally, therefore, it still presses for continuance by means of supporting wealth and income.

(3) **Taxation and Tariffs.**—Taxation again in its traditional forms is an institution making for inequality. Our federal tax system, as we shall see, is largely an addition to the cost of living. Local taxation over long periods is at the expense of the house-renter. We have gone some distance in recent years via income taxes and succession duties to alleviate the regressiveness of our whole tax system, but we have been only partially successful in reaching the big corporate surpluses and increases.

Likewise the tariff is an influence toward inequality. Sectionally, the wealthiest parts of Canada have been fostered by it, and as between persons many of our Canadian families of largest income have prospered through its assistance. Here again the weight of personal gains has pressed upon the rank and file of consumers. By no means insignificant also have been heavily centralized gains acquired through smuggling.

(4) **Monopolies, etc.**—Coming to influences that are less directly-institutional we must mention the monopolies and semi-monopolies that are a feature of our economy. Where the spread between costs and price of product is controlled outside of competition, there is where a great part of our post-war differential profits take their rise. In considerable degree this is directly fostered by government through franchises, tariffs, and subsidies. On the other hand, it is limited by efforts toward conscious control of combines, control of public utility rates, etc.

(5) **Changing Price Levels and Speculation.**—Changing price levels make and break large incomes. In times of rising prices great gains accrue to the productive classes—the owners of common stock, private entrepreneurs, etc. In periods of falling prices these do poorly while creditor classes gain. Largely, changing price levels act as an influence for periodical redistribution rather than for continuing unequal incomes. It has been demonstrated by an English statistician that rising prices have a tendency to raise the highest incomes relatively more than the moderate ones, the incomes of the very wealthy being more sensitive to the effects of changes in the price level.¹¹

Functional Sources of Inequality.—The point has been made that most fortunes have developed out of rent and profits rather

¹¹Sir J. Stamp, *National Income and Other Statistical Studies* (Oxford, 1927), chap. vi.

than from wages or interest: that interest rates are too low to build up a fortune in the individual life-time though they are effective in continuing fortunes already made; and as for wages and salaries with the exception of a few highly favoured entertainers and executives, the recipients do not mass great amounts.¹²

To the extent that this is true, the explanation—so far as it concerns the comparison with interest—lies (1) in immobility of social capital when it has once been committed to particular durable forms and (2) in economic change and inability to forecast its trends. As affecting rents complete capital mobility and full knowledge would make this distinction between rent and interest impossible since free investment causes capital to flow to and from the various capital goods in accordance with their earning power. If rise in land values was the outstanding source of big fortunes in the earlier generations in America, it was because of limited appreciation of possibilities in the new continent by European capitalists at the time of opening up of the land, and dislike of sending their capital so far from home. As the world becomes more informed about investment prospects, both distant and near, capital embraces each opportunity in view of its promise and its risk. But to the degree that investors can never see the future clearly, capital invested in particular durable goods continues to vary in its returns, some mounting high above the interest rate and some running far below. High rents are thus a speculative income. Rents rise rather generally in periods of advancing price levels and during the buoyant phase of the business cycle. Under the opposite conditions they fall. They make rapid gains locally in connection with developments and booms, as with California in the eighties, the Canadian West during the first decade of the present century, and the boom phase of many towns. They suffer losses in excess of interest rate depreciation during slumps. They rise very fast in connection with the early development of specific capital forms, but rents of other durable forms that are falling into obsolescence are sinking meanwhile. Speculation on the produce exchanges is a source of very rapid redistribution through rent changes. The idea that land rents are *generally* a source of return higher than interest rates is probably not well founded.

Profits, associating with the prosperity of the business unit as contrasted with particular goods, have doubtless been a more fertile source of great gains (and great losses) in the past quarter century

¹²R. T. Bye and W. H. Hewett, *Applied Economics* (New York, 1928), p. 537.

than rents or interest. We should emphasize, however, the inclusiveness of the term. It covers promoters' and investment bankers' gains associated with reorganizations and stock watering as well as rewards to entrepreneurs engaged in actual production. It includes, too, speculation in securities which represents redistribution of claims upon the earning power of enterprises.¹³

A source of concentrated gains in this century has been through finance capital created by commercial banks. By definition this is interest although we usually think of it as profits to the banks. We should note, too, that a *limited number* of the great incomes of today are from big salaries of actors and executives, and that differences in wages are very important in significant lesser inequalities among thousands of people accounting for differentials between the poor and middle classes.

Nevertheless the more glaring inequalities are caused in the first instance by rents and profits, associated with price changes, booms, and speculation, and continued in the second stage by those who, having made such gains, join the creditor class and consolidate their position through interest taking.

Suggestions for Reducing Inequality.—Our concern at this point is not with utopias but with a going system with its established institutions, its habits of thought, with rightful claims of investments long since made. What can we suggest in the way of improvement in distribution, keeping in mind the costs as well as the benefits?

One way of approach is to attempt to distinguish between incomes that are earned and those that are not. Basic to this distinction is that between the share of the national income going to property as contrasted to that going to service. Professor Edie writing of the years preceding 1920, estimated for the United States that this ratio stood on an average about 30 to 70.¹⁴ The percentage distribution for the same country in 1936 among the factors of production was 66.5 per cent as wages and salaries, 14.3 per cent as interest and dividends, 15.8 per cent "entrepreneurial withdrawals," and 3.4 per cent net rents and royalties.¹⁵ Among these again divi-

¹³For concrete material on fortunes built up on profits, see R. T. Bye and R. H. Blodgett, *Getting and Earning* (New York, 1937), chap. vi, "Captains of Industry."

¹⁴*Economics: Principles and Problems*, p. 445.

¹⁵Cf. also H. G. Moulton, *Income and Economic Progress* (Washington, 1935), p. 82, figures for 1929. For Great Britain considering home-produced income only, similar figures were (1930): wages 40.9 per cent, salaries, below £250,

dends and interest were almost equal while wages fell somewhat short of being three times the total of salaries. The reader is invited to consider this complex of property and service incomes. The socialist would do away with interest and rent payments amounting here to 10.5 per cent. To this he would add probably the greater part of dividends and some fraction of entrepreneurial withdrawals. But is it satisfactory to assume that all incomes from service are earned and all those from property are unearned? Is there not reason to think that some salaries and even some wages are too high? If we think of effort and sacrifice as a just basis for income, have we not spoken of the abstinence of capitalists and the risk-taking of entrepreneurs? Or looking to productivity, are their contributions not productive? The answer is that while propertied incomes bear a larger proportion of unearned elements they do not contain them all, nor do the service incomes include all that is earned. This is not to say, however, that under a radically different system risk and saving could not be carried on in other and perhaps more economical ways. The way of the socialist goes back of the present division of earned and unearned. It clears the field of present property arrangements and in some degree aligns productive humanity on a fresh basis.

The Position of the Single Taxer.—Less damaging to present production arrangements is the plan of the single taxer. Stressing this distinction between earned and unearned he would draw a clear line between natural land and other capital goods. Incomes from capital he holds are earned, for capital had to be produced by man. Income from land is unearned. Its rent is a result of general development. It is not due to efforts of its owners either past or present. Moreover, says the single taxer, income from the private ownership of land is ultimately the source of most of our inequality and poverty. This being so if the state would take this rent through taxation, while it would be hard on present land-holders, it would strike at the supreme source of exploitation with the result that our system would be purified of its fundamental error, and distribution subsequently would become just. Large state revenues being derived totally from this naturally developing source and being expended upon deserving causes affecting the masses, distribution would operate on a new level of justice. The single taxer furthermore strengthens his case for distribution by pointing out

10.7 per cent; above £250, 14.9 per cent; rent, interest, and profit, 33.5 per cent (Clark, *National Income and Outlay*, p. 125). See also footnote p. 328.

that taxes on land rent as contrasted with taxes on improvements do nothing to injure production.

The trouble with this way of reform is that it fails to appreciate the immediate injustice connected with the adoption of the programme. Sudden action declaring for the complete socialization of land rent would be equivalent to confiscation not only of the present income but also the source of future income of present land-owners. These are not usually the original recipients of the unearned increase. In many cases they are not even younger generation representatives of the same families that received it. They are *bona fide* investors who have chosen to put their money in land instead of other capital forms. A partial socialization of past rents would amount, in effect, to unjust discrimination although in a lesser way. Even a compromise so moderate as to take only future rent increases would strike at the present value of this particular type of investment in a harsh and discriminating manner at the same time as it would yield relatively small immediate revenues to the state.

Nevertheless from the standpoint of eventual justice in distribution the single taxer has laid hold of an important principle. By definition of term the individual owner has not been responsible for what is natural in land. Across the whole period of time practically the entire rent on original land is unearned in this sense. What the single taxer overlooks is that the landholder has very often accepted rent in lieu of wages, and also that unearned income is not confined to land rent. A society might well consider, however, ordering its institutions in advance to capture for the whole group those increases in value generally which are due to social rather than to individual causation. The principle should apply particularly to newly emerging natural values such as water power sites and to socially "made" persons such as motion picture actors and prize fighters.

Reduction of Monopoly Profits and Speculation.—Greater no doubt than rent increases over the period of the quarter century have been the excessive profits that have resulted from monopoly and imperfect competition. The rapid increase in capitalization of many of our industries at the same time as they have paid large dividends as figured on the original investment is ready proof. Contributory to this in our country has frequently stood the tariff. Vast gains from these sources have come to capitalists and promoters at the expense of consumers and wage-earners. The cost of living in Canada could have been lower and the lower brackets of

wages could have been higher. This suggests a line of attack that must be pursued if we would have a more equitable distribution. Much of this represents exploitation rather than earnings. It cannot be condoned by reference to any of the distributive norms that we have examined.

There is a case also against excessive speculation. This is a difficult matter to assess—in view of its many sides. We have admitted the productivity of the professional speculator as an expert bearer of risks. On the other hand, when we witness the succession of stock-market booms and depressions with so much of the national income accruing to a sprinkling of persons who do so little of either work or planning, we feel that we are top-heavy with gamblers whose sumptuous upkeep weighs heavily on the shoulders of those who toil. Some restraint should be placed on speculation.

Improved Taxation.—Detailed study of taxation and public expenditure is to come later. We can introduce at this point, however, a statement sufficient for our purpose. Governments collect revenue from different sources within the nation's income and spend the money in various ways. Mostly the purpose of taxes is to get revenue for defensive or developmental requirements, but there is also the possibility of drawing large quantities from the well-to-do to provide the less favoured with more purchasing power. A fair example of this at the present time is the government's contribution to unemployment insurance. It is not our purpose to advocate the large use of taxation and public expenditure as a weapon for the redistribution of income. It would be far better to distribute it well in the first instance rather than to resort to secondary methods of alleviation. Nevertheless since we are committed by choice to a large amount of government expenditure for various purposes, it is fitting that the funds necessary for the purpose be drawn largely from those who have big incomes and estates rather than from others.¹⁶ Our income taxes are already arranged to fulfil this aim. They take a larger proportion of great incomes than small and they exempt entirely incomes of less than \$750 a person. Inheritance taxes—or, as we have called them, succession duties—have not been used so effectively. Our system of inheritance, as we have stated above, perpetuates inequality across the generations. One way of remedy would be to modify the institution itself, setting

¹⁶Professor Colin Clark estimating the redistribution among classes in connection with the United Kingdom's £1,140 million budget of 1935, found £91 millions passed from the rich to the poor. See *ibid.*, chap. vi.

limits to how much might go to a child, a wife, a parent, or a more distant relative or friend. This would seem to be the logical method. But since governments must have revenues from some source and since they represent a wider diffusion of the estate funds than would likely occur even if we changed our inheritance laws, we should in the interest of the greater equality seek a fuller use of inheritance taxation. The rates should be steeply progressive as the bequest to any individual becomes larger. They should also increase in relation to the size of the estate itself. Exemptions should not be so high as to maintain heirs in luxury. The stigma of "unearned" applies with exceptional force to inherited incomes. Government expenditures, again, might be directed more to bonusing projects and to the creation of public assets whose benefits would accrue to the low income groups. Workers' house construction under public authority or housing carried on with public assistance is finding favour in many countries.

Increasing the Lower Wages: (1) **Steadying the Worker's Income.**—The problem of inequality may be attacked by restraining the more fortunate members of society from getting as large a portion as they do, or on the other hand, taking measures to bring up the proportion of the lower classes of incomes. By no means all profit and rent takers are wealthy, neither are all wage-earners in the lower groups, but in the main the reduction of inequality is promoted by measures that assist at least the weaker sections of labour into higher wages and steadier incomes. Unsteady incomes constitute a problem somewhat different from low wages and the way of remedy consequently is not the same. Sickness, unemployment, and accident interfere with the regular payment of the worker and their frequent recurrence has much to do with creating inequality and poverty. Similarly when age overtakes the property-less labouring people and they no longer earn any income through the sale of their services, there develops through their hapless state a further accretion to inequality. Any measures tending to lessen the recurrence of unemployment and sickness and any arrangement for continuing the payment of income in any of the four conditions named during times when no services are being given will tend to reduce inequality. The treatment of these topics is reserved for a later chapter.

(2) **Increasing the Wage Rate.**—Apart from the matter of regularity of payments, the share of the national income coming to the worker depends upon how high his wage is. Our analysis of wage

rate determination has been in terms of demand and supply of workers. Any influence tending to increase demand or to decrease supply will make for better wages. Consideration of possibilities of social control of total demand has already occupied us in connection with full employment and stabilization. As for supply, no treatment of decreasing inequality through increasing wages would be complete without mentioning the activities of trade unions in substituting collective bargaining for individual bargaining. State action also, favouring more general application of this method, is doing a great deal to iron out wage differences, though it may not be so potent in increasing total wages at the expense of other production factors. Minimum wage legislation such as we now have in our various provinces should be better enforced and in some cases the minimum raised. Both of these topics are treated at some length in chapter xxx. Suffice it here to say that each of them, while not likely to fulfil the extravagant claims made for it by some enthusiasts, offers considerable promise for maintaining limits to economic inequality. The trade union with its bargaining weapons and its indirect effect upon labour's productivity as well as upon labour supply is doubtless on this continent the more positive force. Its weakness, so far as it affects our present topic, is that it has failed to extend its organization to cover all sections of the lowest income population.

(3) **The Family Wage.**—Under our wage system workers are paid in relation to their productivity as estimated by each employer. This takes no account of the number of persons dependent on each worker's wage—whether it is only the worker himself or whether it is a family of six or eight. Considerations of need and the proper nourishment of the workers of the future suggest the propriety of some extra income supplementary to the contractual wage, and graded according to numbers in the family. Sir William Beveridge found for Britain that size of families and cutting off of incomes rather than low wages were the chief causes of poverty.¹⁷ The effect of unequal numbers in families upon the expenditures upon each member was likewise highlighted in the Canadian study already referred to.¹⁸ In 1944 the federal government moved to remedy this great injustice by passage of the Family Allowances Act to take effect July, 1945. It provided

¹⁷Sir William Beveridge, *Social Insurance and Allied Services* (London, 1942.)

¹⁸See *supra*, p. 536.

for the payment to parents on behalf of children under sixteen years of allowances on the following scale:

0 - 5 years	\$5.00 per month
6 - 9 "	6.00 " "
10 - 12 "	7.00 " "
13 - 15 "	8.00 " "

These rates are reduced \$1.00 per month for the fifth child, \$2.00 for the sixth and seventh, and by \$3.00 for the eighth and subsequent children. Through this act approximately \$250 million was paid out of Dominion revenue to mothers of Canadian children in 1946. This type of equalizing legislation is lacking in the United States though it is widely prevalent in Europe and Australasia.

Equalizing Opportunity.—Most of what we have said in all the recommendations above could be included under this caption. More narrowly we refer, however, to educational opportunities and to opportunities to obtain entrance into ways of life that promise high incomes. A great deal is to be said for the further democratizing of advanced education. Promising young people of the low-income group should be assisted with scholarships supported by the State as has been done recently for the returned servicemen of the armed forces. Even more important in this connection is liberal provision for vocational education. An effective and impartial contact service is vital. In fact everything that makes for the occupational mobility of the working class, every assistance that will enable some of those in the lower sections of the triangle (p. 322) to climb into the higher groups, will promote an evening-up among service incomes.

Such steps as these last are limited, however, mainly to differences in service incomes. They will do little to distribute better the 25 to 35 per cent that goes as a reward to property. For this we must look to discriminating taxation and expenditure, or go back of this to attempting a change of the fundamental institutions, perhaps after the manner of the socialist.

Summary.—In this chapter we have sought to present the conditions of inequality as they existed in our society, especially between the two world wars. Gradually a social conscience is waking in us, along with a realization of general economic loss, and we are moving to improve matters. Forms of taxation devoted in part to this purpose have come in for wider use. Monopoly has been assailed, though not too effectually, under the Combines Investi-

gation Act. Family allowances we have mentioned as a recent accomplishment, but there are other measures still to be presented such as old age pensions and unemployment insurance benefits which strike at poverty and represent a transfer of many millions of dollars annually from the well-to-do (largely) to the less fortunate. Such legislation, it should be appreciated, seeks to redistribute what has been poorly placed through the price system. More direct and primary have been the minimum wage laws of our provinces and the great accomplishments of the trade unions through collective bargaining as they have tripled their numbers and consolidated their strength since 1939. But these in turn do little for the inequalities and unredressed standards found in many rural and maritime areas. Low incomes and shabbiness in fact tend more and more to characterize the unorganized and uncovered sections of society.

CHAPTER XXIX

ECONOMIC INSECURITY

LIMITATIONS on Workers' Utilities.—An economic system has for its purpose the creation of utilities for the satisfaction of the people. Satisfaction, we have been interpreting thus far chiefly in terms of consumption, and all the paraphernalia of production and marketing have been viewed from the angle of their serviceability to consumers' enjoyment. We are now to take note that total satisfaction considered from the standpoint of the individual, as well as society, has its negative as well as its positive aspects. In our chapter on wages we opened the way for this point when we spoke of pain cost or disutility experienced by the worker, which we measured against the satisfactions anticipated from his wage. The reference to abstinence on the part of the savers of funds in our chapter on interest likewise is pertinent to what we have now to discuss. In this chapter and those immediately following we are to consider the worker not only with respect to the amount of income he receives, i.e. his positive command over goods and services but also with respect to his condition of life, his fears, his sacrifices, the negative side of his balance sheet. For the enjoyment of bread and meat is not something absolute but is relative to the mental and physical condition of him who consumes them. Thinking exclusively in terms of an income calculus, we may fail to realize that the satisfaction from a twenty-five dollar a week wage is one thing where the recipient is secure in his job; it is something different where fear for next week's employment colours the outlook; we may overlook the point that a given amount of money represents a greater satisfaction to a man and his family when he has ample leisure than when he works a ten-hour day at arduous toil; and that the psychic return to a miner's family from whatever wage he gets is lessened immeasurably by the fear of explosions and roof-falls, which pervades the atmosphere of all mining communities. To develop both aspects of the subject, viz. income and qualifications that weaken its enjoyment, will involve us in an examination of the worker's condition generally with respect to his job. More speci-

fically, it will cover such matters as the sufficiency or insufficiency of his pay, the length of his working day, the quality of his surroundings while on the job, the relation of his work to his health, and the regularity of his employment. For the most part the study presents itself in the form of a set of problems. It is seen in terms of inadequacy, failure to size up to the standards that would result in a society that turned its resources and its talent directly to the satisfying of the people. Included also in the recital will be found an account of what the worker has done to improve his lot and what steps society has taken, presumably mostly in its concern for the general interest, but sometimes for humanitarian reasons, to assist him. The story of the struggle for adequate wages and conditions will be postponed for the moment. Our first concern will be workers' economic insecurity.

Economic Insecurity: Preliminary Statement.—Insecurity is inherent and general in our capitalistic order. In our study of profits we saw that entrepreneurs struggled with risk and that their share in distribution was largely in terms of it. The owners of houses and factories again, conscious of their insecurity, buy their freedom from it through insurance. But the insecurity that is associated with property has its reward. This works out through the operation of the price system. Capital, we have seen, invested in the presence of risk anticipates a higher return than that invested in safety. Insecurity, as it attaches to the wage worker, fails—unless socially directed measures are taken—to command similar adequate recompense. Unemployment, sickness, and accident result in a direct subtraction from his income. Though some allowance is made in the wage rate for dangerous and irregular occupations, it is in no sense comparable to the risk. The incidence of the burden, furthermore, would be unequal even if such allowance were made. He who is injured or discharged draws the whole effect of it upon himself and family while others are unaffected.

Such is the unfortunate situation with all its dire consequences—reduced purchasing power, accumulation of debt, lowered standard of living, and inadequate education and under-nourishment for the children. Yet, apart from social attack on the matter, so long as we rely on the profit motive to control the conditions of production, insecurity will be with us. When profits beckon, labour and resources are called into use. When they drop off, the demand for men and resources decreases. When it pays to permit accidents and diseases, energetic action is not taken against them. Some part of

physical insecurity, it is true, must inevitably associate with industrialism but *economic* insecurity is a by-product of capitalism. It goes with the free pricing system of an exchange economy, freedom of choice in consumption and changing demand for various goods, freedom in hiring and discharging of workers and the stimulus to keep down costs, and, finally, dissociation of the workers from the instruments of production and from any possibility of remuneration except as they find entrepreneurs capable and willing to pay them for their services. The reader will understand the whole matter better if he can draw comparisons from history. As contrasted with his feudal ancestor of eight centuries ago, the worker today is freer so far as mobility is concerned but he is less secure. To quote from Dr. W. H. Hamilton:

Custom granted to the former the use of the same land year after year, exacted from him a fixed rent, forbade his dispossession, and made his position permanent. He and the land formed an inseparable industrial unit: there was always something for him to work with; what he produced he had. The problem of want might indeed confront him; but it was associated with a raid of an alien feudal lord upon his manor or the failure of the elements to grant a full yield from the earth. The group to which he belonged was established upon a "personal" basis, and was possessed of a spirit of solidarity. He possessed as long as they possessed. . . . In modern industrial society, on the contrary, there is no permanent association of the labourer with the instruments of production. . . . He owns no equities in the property with which he works.¹

With some exceptions, we may add, he is sustained by less group solidarity. A comparison with the town worker of the seventeenth century will show a similar increase in the incalculable element of life, and how the modern working man has lost those guarantees that went with guild organization and closer association with natural and community resources.

Changing industry, the fluctuating demand for workers, the employer's right to discharge and the economic necessity often of his using it, suggest the subject of unemployment, the most impressive and far-reaching labour problem today on this continent. A résumé of its nature, causes, and suggested lines of remedy will take a large part of this chapter. Unemployment, however, is not the only condition contributing to labour's insecurity. Accidents and the diseases peculiar to different branches of industry constitute another phase. Like unemployment the problem of accidents is in its modern form a result of the Industrial Revolution. Accidents there were, of course, in the earlier economy, but they were not the

¹W. H. Hamilton, *Current Economic Problems* (ed. 3, Chicago, University of Chicago Press, 1927), p. 556.

accidents of machine industry, harnessed natural forces, and mechanical speed. The changing problem has called for changing treatment. Sickness and old age are further problems contributing to workers' insecurity. While not industrial problems in the sense of having their rise in industry, they, nevertheless, are economic as well as social. Dependent old age, we have seen, is relative to the conditions of employment, and sickness represents an enormous cost to society not only through losses in production but through the haphazard way it has of laying the burden of this cost upon particular victims.

Remedy for each of these problems, it may be stated in advance, has progressed along two different lines. One of these is the natural way of attack upon all human evils, viz. prevention. Through education society has sought to turn the spot-light on the various problems, to discover their dimensions and their real nature, and to spread information. Beyond this it has appealed for co-operation of all parties to industry to reduce the evils as far as possible. Finally, it has passed laws laying down the minimum required of each responsible party concerning what it shall do. The second way is the method of social insurance. This does not aim chiefly to eradicate the evils, though we shall find preventive aspects do enter in, in some cases. It seeks rather to diffuse the burden of them through spreading it over large numbers, the tendency of the present time being to spread the net so wide as to include the whole of society. Social insurance may be defined as a modern device for diffusing the loss of earning power resulting from accident, sickness, unemployment, and old age over large numbers so that it will not fall upon the same persons who suffer from the actual physical injury or inconvenience. Until recently it had a wider application in Europe than on this continent. Where it covers all these incalculable and uncontrollable hazards of a worker's life conditions can be better borne even though wages are low. Our nineteenth-century habit of thought, however, has been to extol individual thrift as expressed in personal or family savings and to discount any reliance upon social or community funds. We glorified the individualism that was calculated to make men rugged and self-dependent. Our attitude now is changing and the idea of society standing together to meet the incalculable burdens that fall unannounced upon its unpropertied members is gaining ground. Social insurance, by substituting a small certain premium for a larger incalculable loss, causes workers to stand together in mutual assistance not unlike

that of the guildsmen of medieval times. Where employers contribute to the funds according to a prescribed plan, they tend to consider their contribution a part of their costs even as they do their taxes, property insurance, etc. In this way the burden is passed along to the consumer in the price he must pay for the products. Theoretically, in competitive production, the whole of the employers' contribution would be so disposed of. If, perchance, the employer builds up the fund alone without the worker's assistance, the consumer may be said to pay for the whole financial risk of the worker to the degree at least that it is covered by insurance. This has come to be the regular method for carrying the financial burden for accidents in industry. It is not insurance in the sense that the term is generally used, for the insured pays no premiums. It goes under the name of "workmen's compensation." Under monopoly conditions employers' contributions do not necessarily all pass to the consumer. Some part would be borne by the monopolist himself, the amount depending upon the degree of elasticity of demand and the conditions of cost in his industry. With some social insurance the State makes a contribution to the fund, in which case society again bears the load, distributed not, however, according to consumers' purchases but according to the way taxes may be laid upon the different sections and classes of the population. Some people have said it makes little difference who builds up the fund in social insurance since society must pay it anyway. If the State pays, it falls to the citizen in taxes. If the employer pays, it falls to society as consumer. If the worker pays, the employer will have to allow him more wages to make his payments and it will come back to society again. This is plainly loose thinking. Society as consumer is different from society as taxpayer. The burden of insurance will fall heavier on the high income classes through the direct State contributions than through the employers' contribution method. The wage worker may or may not pass his share on to the employer depending upon whether or not he is living at the minimum of subsistence at the time the system is inaugurated; and if he is not, then it depends upon the definiteness of his standard of living and the tenacity with which he will defend that standard. If he is at the minimum, he will not be able to pay any contributions. If he defends his standard stubbornly, he will reduce numbers and refuse to have his wage encroached upon for contributions.

Social insurance funds, we find, are built up on a variety of bases. In the British and Canadian systems of unemployment insurance,

employees, employers, and State all contribute. In the German system, only employers and workers contribute. In the Canadian old age pension arrangement, the State takes the whole load. In most systems of accident compensation the employers pay it all. Again, in some cases, insurance is compulsory, enforced according to definite legislation; in others it is purely voluntary, being initiated by individual employers or groups of employers or workers.

A. UNEMPLOYMENT

Nature and Causes.—Unemployment has come to be the greatest source of labour's insecurity. Approximately 15 per cent of

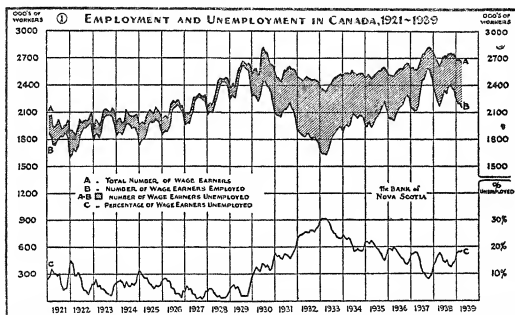


FIG. 42

Canadian wage-earners were unemployed in 1938 as compared to 2.5 per cent in 1928, 26.5 per cent in 1933, and 2-4 per cent in 1946. The complete inter-war picture is shown in Figure 42.² Unemployment, moreover, does not run evenly over the face of national employment. In Britain, for instance, in March, 1932, over 50 per cent were out of work in ship building as contrasted with over 40 per cent in iron and steel manufacture, over 25 per cent in coal mining and in pottery and building industries, over 20 per cent in cotton, shoe, and rubber industries, over 10 per cent in hosiery, tailoring, printing, bakery flour milling, and public utilities, and under 10 per cent in carpets, dress making, laundries, and profes-

²Bank of Nova Scotia Monthly Review, June, 1939.

sional services.³ In Canada, for the same month, March, 1932, according to estimates by Professors G. E. Jackson and H. M. Cassidy, the logging industry showed 71 per cent unemployed as against 61 per cent in construction, 33 per cent in manufacturing, 32 per cent in transportation, and 23 per cent in trade.⁴ A large section of the working population is scarcely susceptible to unemployment in normal times, whereas other sections have it with them as a constant visitor.

Losses from unemployment ultimately affect all sections of our economy, but, to the worker upon whom the burden falls in the first instance, they come as a direct infringement upon his standard of living and even as a challenge to life itself, except as it rests on a basis of charity. Psychologically, as well as materially, the effect is demoralizing. The regular habits of industry are broken, co-operative attitudes are shaken, and the sense of personal value as a contributing member of society, appreciated as such, is weakened. In this connection, too, we would stress again the point made earlier in this chapter. To people who have been self-reliant and self-controlled by means of the services they have been selling to society, to be laid off and denied the right to work, or even to live in fear of being laid off, is to reduce the satisfaction coming from the goods they do consume. To be thrown upon actual charity is to turn their bread to bitterness. These are surely considerations for economic theory or what is the meaning of economics? Socially and politically, the results are equally to be deplored.

Unemployment, as we shall use the term, refers to idleness on the part of a worker which is not due to his own physical, mental, or moral shortcomings. When he becomes unemployable, he ranks as a pauper. He becomes a charge upon society in any case. His treatment does not concern the economist except to consider him as a matter of cost. Similarly, a man on strike should not be treated as one unemployed. The figures for Great Britain above take account of such distinctions. Those for Canada are not so well purified. The term *unemployed* includes those who can work but cannot find jobs for which they are reasonably prepared, because of some fault in the economic order over which they have no effective control.

³Adapted from G. D. H. Cole, *A Guide through World Chaos* (New York, 1932), p. 264.

⁴*Proceedings of the Canadian Political Science Association*, vol. IV, 1932. See also current issues of the *Labour Gazette*. For depression years consult A. S. Whitely in *The Canadian Economy and its Problems* ed. by H. A. Innis and A. F. W. Plumptre (Toronto, 1934), pp. 118-19.

The causes of unemployment we may list as seasonal, cyclical, technological, political, and casual. Seasonal unemployment is of great importance in Canada where population centres in a comparatively limited range of latitude and where climate runs through a wide variation in temperature from season to season. It requires little imagination to see why agriculture, lumbering and logging, harvesting and canning, ice-cutting, and building industries should be seasonal. Causation does not stop, however, with the circumstances of crude temperature differences. Clothing and millinery are also seasonal. So, likewise, are printing and the automobile industry. Human institutions such as Christmas and Easter and seasonal buying habits only indirectly connected with climate have a bearing on seasonal employment variation. In Canada in 1928, the number of unemployed in February was estimated at more than three times the figure for August. Fortunately, the slack and busy seasons of all industry do not run contemporaneously. Coal mining and especially coal shipping, logging, Christmas trading, and the theatre offset through their fall and winter emphasis the agricultural, building, and other industries which favour the warm months.

More spectacular and in recent times more devastating in its effects has been unemployment caused by the changing demand for workers at different phases of the business cycle. Although it is not possible to distinguish clearly between this and unemployment due to political and technological causation, examination of the figures over the inter-war period for Canada and the United States would seem to place this type first in importance.

Unemployment caused by changes in goods and in industry is called cultural and technological. Sometimes a whole trade practically passes out of existence due to changes in demand or because its product is superseded by another. Thus, the driving wagon and the light horse and harness have passed, along with the bicycle, to make way for the automobile. Similarly, the "talkie" has lately displaced the theatre musician, and the adding machine has made worthless the skill of the rapid computer in our banks and accounting offices. More usually the transition is not so complete, as for instance, where electric power makes its inroads upon coal mining, where cement reduces brick-laying, or where the phonograph weakens the sale of pianos and then itself suffers at the approach of the radio. But not only does one industry make inroads upon another through change and invention, but workers are displaced by machinery within a given trade. Thus

one steam shovel displaces five hundred hand workers in digging iron ore. A sand-packing machine displaces eleven moulders in the foundry. In the casting of iron seven men with the aid of machinery cast as much as sixty did three decades ago. An important by-product of this technological change is the chronic over-development and over-manning of some of our industries. Notable examples are the bituminous coal and railway industries.

Interesting questions arise in connection with technological change concerning its long-run effect upon numbers of workers employed. The verdict of history is that industry expands with all progressive change and in the course of time more men are always employed than formerly. Theory suggests various outlets for the displaced as improvements take place through invention, resulting in one man doing what ten men did before. Some will be used in making the new machinery. Presumably, costs of production are lowered and this will result under competition in lower prices in the commodity. If the good is an elastic one, more will be consumed which in turn will call for more workers as well as machines. If it is not elastic, consumers will at least have funds left, on account of the lower price, to buy other goods, which again will mean increased employment. And thus the argument may be pursued assuming (1) competitive conditions and (2) monopoly conditions.

By unemployment due to political causation we have in mind all that traceable to the disturbances and disruptions in industry resulting from national exclusiveness and enmity. The marketing of goods transcends political boundaries and tends to establish avenues of trade along which the products of factories and fields become accustomed to pass. Governments, looking to the narrower interest of the particular nation or even to the interest of special groups within the nation, throw up tariffs against foreign goods from time to time or tear down tariffs previously erected, in either case dislocating the established order of production and throwing workers out of employment. Without attempting at this point to weigh the advantages and disadvantages of moderate tariffs, it is within our right to declare that the gross interferences with world trade and industry that are involved in the economic nationalism of recent times have been a leading cause of unemployment in practically every nation. Under the term *political*, we must include also wars and their aftermath with the blighting influence of war debts and demobilization and readjustment of men and of industry. Wars are welcomed by some people as purveyors to good times and prosperity

but these fail to appreciate that such prosperity is paid for out of capital account. It is in the record of every great war that it has been followed by a period of unemployment, dislocation, and economic helplessness. Among other features, where indemnities are laid upon the conquered, the direction of payments is always opposed to world economic well-being for through them additional burdens are placed upon the peoples of nations already impoverished.

Under modern economic organization there are many employments which by their nature are fleeting, irregular, and uncertain. The classic example is that of the dock worker whose work consists of loading and unloading freight ships. The arrivals of ships are, of course, irregular, especially in the case of the so-called "tramp" vessels. In the great seaports such as London, Liverpool, New York, and Montreal, hundreds of men depend for their existence upon the possibilities of employment when ships come into dock. A few days of strenuous work is followed by an undefined period of idleness. Alternation, uncertainty, and uncharted living is the order of life for such men. Similar in most respects, but somewhat more regular, are some of the seasonal trades whose period is so short as to afford no adequate basis for a planned economic life. Such have been the wheat harvest of the West to which train loads of men from Eastern Canada were wont to pour, the hop harvest of California and Britain, and lumbering in various parts of America.

In addition to the sources of unemployment that we have mentioned, consideration should be given to that which results through poor organization of the labour market. Labour as a commodity we have learned lacks mobility. This may be because of either occupational or geographical reasons and frequently features a lack of knowledge of where the job that awaits is to be found. In any case in countries as far flung geographically as is Canada considerable unemployment must be thought of in these terms.

Remedies for Unemployment.—In view of the different strands of unemployment it is only reasonable to think of different remedies being applied as far as possible at the various sources, each to each. While logical, this methodology if strictly followed is not always productive of the best results. The business cycle and political forces are hard to control, and progress through technological change has its own strong claims for continuance in spite of this unfortunate by-product. In the main we cannot eliminate these influences but must deal with them. We may, however, keep in mind in our sug-

gestion of improvement the applicability of each remedy to the different types of unemployment.

Basic to all thinking about unemployment of whatever type is the fact that the worker's guarantee to a living rests in the conditions of our "free" economic relationships. There is no compulsory permanence of employment through contract. The worker's real reliance, in fact, rests on two circumstances inherent in our economic order, viz., (1) his present employer's continuing need of his services and the loss he will sustain through dismissing him, and (2) his ability to transfer his services by finding work elsewhere in an economy of competitive employers. When unemployment occurs it is natural to look to these bases of workers' dependence to see what is amiss and perchance to seek remedy through calling them to account. We treat with them here under the captions "stabilization or continuance" and "mobility." Thereafter we look to forces outside the competitive economy as such, notably to government assistance and compulsion, and to workers' mutual aid.

Stabilization or Continuance.—In the first place, there is evident among some progressive employers an attitude favourable to keeping their workers steadily on their payrolls. Improvements in cost accounting and assignment of gains and losses to particular departments have brought home to many employers the costliness of labour turnover, as well as of idle plant and machinery that go with dismissal of men. It has been found that it costs a lot to break in new workers. Firms, therefore, have advanced to the point of guaranteeing their workers minimum amounts of employment for the year. A famous soap company, for instance, has for two decades guaranteed a minimum of forty-eight weeks. A second firm has developed a private insurance reserve whereby, if it does find it advisable to dismiss employees, they may be assured of 80 per cent of their wages while idle. These examples, while outstanding, are not uncommon. Such action calls for careful planning on the part of management. The older method of running business in complete accordance with market demand for one's commodity and discharging and employing workers as needed is much easier. Sometimes planning involves redistributing energy and favouring the production of fashionable goods just before the fashion season and using men and plant for the production of stock goods at other seasons. Sometimes it is a matter of introducing new lines for the deliberate purpose of carrying through such a plan. In some cases reliance has been placed upon regularizing consumption through

advertising and special sales' offers calculated to stimulate a larger proportion of buying in seasons of slack demand. Coal companies offering their product a dollar cheaper to buyers ordering before September 1 is a case in point.

In spite of the promise along these lines, however, it is too much to expect that industry will reorganize itself in any complete sense through voluntary action. It requires no great knowledge of products to appreciate that the loss from labour turnover is much less in some industries than others. Where little skill is involved the newcomer may do quite as well as the experienced. Employers frequently find the loss from idle plant less than that from operating it, when they can free themselves from wage and raw material costs. Undoubtedly, some firms have sought favour for their wares with consumers through the appeal of the exceptional treatment they are according to their employees. Industry generally cannot benefit by such appeals for discrimination.

The second thought, therefore, is to bring into the situation a larger measure of stability through enforcing uniform standards upon the whole area of competition through social action. Conceivably, this might be done through the medium of trade associations naming the minimum number of weeks per year that its employer members might pay their men. Doubtless, government action would be necessary to see that all employers in the given industry were parties to the agreement, that the minimum named in each case was high enough, and finally, that the minima decided upon by different industries bore some resemblance to uniformity. A development coming from within the trades would have some advantage over direct initiative and compulsion by government in that differentiation could more easily be made among industries. Trades definitely seasonal in nature could not be expected to offer forty-eight weeks' employment per year. They might, however, be compelled to size up to a twenty or a twenty-six weeks' requirement. It has been argued again that if the requirement of a continuous wage was general, it would affect all alike and the price of the commodity would be brought into line with the increased cost if there really proved to be such. The economic philosophy behind the idea is that every commodity should sell for enough to cover all its legitimate costs in its price. It has been our habit to raise no question about its having to pay its own interest and raw material cost. Why should it not likewise pay its whole labour cost instead of throwing its employees upon society to be supported whenever

it finds it convenient to do so? It should pay its own way. If people do not appreciate a commodity sufficiently to pay enough for it to cover its entire costs, it is apparent that its utility is low. The larger economic satisfaction would be attained through letting it depart rather than through subsidizing it thus at the expense of other commodities. But the practical question will intrude, "How can an employer keep on paying wages if his market has irretrievably lapsed? How could the construction industry, for instance, manage to do so for long periods when no orders for building were forthcoming? The principle might work well enough with soap manufacturing but what about it here?"

Further questions relate to technical improvements and to decaying trades. If the employer were required to maintain his labour force in full numbers, what would be the inducement to adopt new labour saving machinery? In answer it can be asserted that such regulations would modify the pace of introduction of new inventions into industry, the adoptions roughly taking care of new expansion but not giving cause for gross displacement. As for decaying industries, it is frequently true that new ones supersede them and the same men who have been prominent in the leadership of the decaying trade are in the forefront in developing the one that supersedes it. In some measure, therefore, the situation would be taken care of by shifting workers to the new line. These are proffered as partial answers only to these questions. On the whole our system does not contemplate stable payrolls by individual employers or even by individual industries. At best it might tolerate some compromise with the principle.⁵

Increasing Labour Mobility.—The principle of continuance, apparently, if too drastically adhered to, would strangle progress and force the use of labour in lines unprofitable to society. It should, therefore, be tempered to conform to what seems the larger economic interest. The values that lie in labour mobility should be recognized and steps taken to assist in making the worker mobile. The term *increased mobility* should be understood as meaning not a higher rate of turnover but rather capacity of the worker to go to, and enter, and work efficiently in lines other than the one in which he is at present engaged.

Mobility may be furthered by what has been called dovetailing of seasonal trades whereby conscious effort is expended on arranging

⁵For application of this principle to Canadian railways, see G. M. Rountree, *The Railway Worker* (Toronto, 1936).

the industries in a given area to allow workers to proceed from one to another with as little lost time as possible. Where this is done by a single firm as where ice distribution in summer is co-ordinated with handling coal in winter, it really comes under planned continuance rather than mobility. Encouragement might be given to such dovetailing, however, at the hands of separate firms by chambers of commerce through their exercise of selectiveness in their invitations and special attractions offered to new industries to enter their area.

Much broader in its application is the idea of increasing mobility through improving the organization of the labour market. To the degree that unemployment is a matter of jobless men and manless jobs failing to connect with one another, this way of remedy appeals as the most natural and sensible. The time-honoured method of meeting and hiring the worker as he presents himself at the gate has long since been supplemented by newspaper advertising. This, however, is a blind and crude instrumentality for the purpose. It tells the parties little of one another and it frequently hides more than it reveals. At the hands of unscrupulous employers it has been used to decoy men to distant points and into disagreeable callings only to use them while they will stay and then replace them with others similarly misled. The newspaper, nevertheless, has some merit in providing an index to possibilities of jobs. It should not be relied upon to function alone.

More direct agencies of organization are the employment exchanges. In the past these were private, operating for profit. In their quest for gain they were interested too largely in placing men regardless of their fitness for the task or the decency of the conditions on the job, since their revenue was derived from a placement fee and usually a percentage commission to be collected from the first months of work. While some such exchanges, especially those dealing with the more cultured sections of workers, really gave a good account of themselves, the record of others was indeed shady, revealing glaring examples of human exploitation. Exchange functions carried on by trade unions are operated in the interest of the worker and have performed a useful service where men are sufficiently organized. They are, however, one-sided in their point of view. They are distinctly sellers' monopolies and tend to force upon the employers rules of non-discrimination as between the members offering service. There is too frequently little of selection of the man in relation to fitness for the job.

Finally, there are the public exchanges supported by government and administered by officials chosen by government. These are calculated to serve the best interests of both parties. Canada has had a system of such exchanges for a period of thirty years. Formerly under combined federal and provincial authority with headquarters in Ottawa and the various provincial capitals, it involved some eighty-five branches (1939) located in seventy main industrial centres. Although favoured with special railway rates in shifting workers to points of large employment, it never achieved more than partial success, and with the coming of the depression it had largely ceased to function as a system, though the branches operated for the assistance of a large body of workers in the local situation. A market for any commodity or service, we have seen, involves the bringing together of the forces of demand and supply. The older Canadian Employment Exchange system never achieved such organization except in a partial way. On the demand side in particular, only a fraction of employers registered their needs with the exchanges. On the supply side, too little was done to develop information about the individual worker and his fitness for different lines of work. In 1940 with the passage of the new Unemployment Insurance Act a purely Dominion service was inaugurated. By the terms of this act, which today covers nearly three million workers, all persons to be eligible for insurance benefits when unemployed must present their cards at the exchange whereby they become registered as applicants for jobs before they can be effective applicants for benefits. Failure to accept jobs without sufficient reason, or to take training to prepare for jobs, constitutes a bar to their receiving benefits. In this way labour supply becomes intelligible and men are made cognizant of opportunities. Yet by no means is it mobilized to overcome the difficulties involved in distances, lack of housing facilities, lack of occupational training, family ties, and personal dislike of unaccustomed jobs and all the other factors that make for immobility. Employers furthermore are not required to register their demands, and only as they find it to their advantage to do so and as adequate information is developed about both jobs and men, can there be true organization of the market. Finally education looking to versatility is necessary as well as courses of training deliberately planned with respect to the needs of the time.⁶

⁶For emphasis on retraining and guidance, see *Final Report of National Employment Commission* (Ottawa, 1938), pp. 11-14, 39.

Public Employment.—In our economic system the organization of industry and the development of profitable economic projects are left mainly in private hands. This being the case, we should look as far as possible to private enterprisers to find jobs for the population, supporting them only with such social assistance as we may, in making them efficient in their great responsibility. In the main, unless we take the road of public ownership and operation of industry in a wholesale and permanent way, we should not assume as a social responsibility a task which rightfully belongs with the directors of industry.

Nevertheless, when private industry fails in its part, the task falls to society to do something for the helpless when their source of economic existence ceases. Ultimate responsibility is with the State. Government comes to the rescue chiefly in three ways, viz. through public employment, compulsory social insurance, and direct relief.

Public employment may be considered in two lights, viz. as an emergency device and, second, as a long-range project whereby government plans its undertakings with the deliberate intention of supplementing industry in providing work for the population. The first of these is exemplified by what the various governments in Canada have done in the thirties. In large measure it is uneconomic, and that for various reasons. It does not arise in direct relation to consumers' demand for the product; it pays little attention to the special capacity and training of the men it uses, placing white collared specialists, for instance, at work in digging sewers; it deliberately offends the principle of least cost combination of the factors through prescribing that men shall perform tasks that otherwise would be done by machinery. Too often the projects have been conceived without much attention to any ultimate satisfaction that they might bring to the people in the future. The merit or demerit in emergency work, however, is revealed by comparing its result with conditions that would exist without it. Though often shooting wide, the mark is at least higher than public relief or charity, which, to the economist, are simply helplessness—admission of defeat. As long as human wants exist and the resources of production are at hand, it should be possible to organize the latter in some fashion for the benefit of the former when private industry has failed. Although the range of possible projects that government can undertake in an emergency may be limited, there is no excuse for producing worthless things and using men simply to keep them

occupied. It has been argued that public works are more expensive than relief. Undoubtedly this is true of most ventures open to government operation at such a time, so far as treasury figures are concerned. The real comparison can only be made, however, when the worth of the products resulting from the work has been deducted from the cost,⁷ and the play of idleness on personality is assessed.

Long-Range Government Planning.—In view of the wastefulness of emergency work and the poorly conceived nature of many projects, some people have taken up with the idea that governments should look ahead and, in anticipation of future unemployment, so schedule their public undertakings as to hold back the less necessary projects during prosperous periods, and thus be ready to provide work for great numbers when depression falls upon private industry. In addition to this planning of undertakings, the idea involves also the development of reserve funds during the years of plenty, or, what amounts to about the same thing in public finance, the maintenance of a wide margin of unused borrowing power, so that funds would be readily available in large amounts to break ground at once upon the projects as planned when the hour of need strikes. The philosophy underlying this whole idea, it will be seen, is that industry is not likely to assume responsibility for keeping men at work, that it is impossible or unwise to use government in a regulatory capacity to force it to do so, and, finally, it must devolve upon government to serve as a compensatory production and employing organization to make good this failure of industry. In support of such action it is argued that governments can foresee their future construction work with comparative ease and that a large part of such undertakings, not involving immediate and pressing wants, can be halted or advanced with no great hardship to anyone; that building is cheaper in times of depression; that governments are best able to handle the long-term financing necessary to such operations on account of their easier interest rates as well as their ability to command credit in dull times; and, finally, that such activities would, of themselves, be a great force for the regularization of industry. The using of materials would stimulate demand in the raw material industries, their carrying would stimulate transportation, their use

⁷For varied operations under the Works Progress Administration in the United States, see Corrington Gill, *Wasted Manpower* (New York, 1939). For Great Britain consult R. C. Davison, *The Unemployed: Old Policies and New* (New York, 1937). For Canada, H. M. Cassidy, *Unemployment and Relief in Ontario* (Toronto, 1932), chap. 1; also Canada, Department of Labour, *Unemployment and Agricultural Assistance Act, 1938* (Ottawa, 1939), p. 10.

of machinery would assist the metal and hardware industry. The payrolls involved in direct government work, along with the additional funds passing to the employees in these supporting trades, would, likewise, increase merchandizing, and in general the multiplier principle would demonstrate its worth.

On the other hand, it is contended in opposition that the amount of government undertakings susceptible to such control is limited; that governments find it almost as hard as others to increase operations when public opinion is calling for retrenchment and lowered taxation; that the cheapness of building during periods of depression is a mirage; and lastly, that government enterprises can never be expected to stimulate private industry back to normality, nor should government ever be used for such a purpose.

It will be seen that beneath the contradictions in facts and in opinions that abound in this controversy, there lies the fundamental issue of what is the proper relation of government to industry, and further, whether or not it has a responsibility to come forward as emergency entrepreneur when others fail? Those who are sticklers for logic in economic organization are saying in effect, "It would be better to take the reins all the time than to attempt to drive when the horse is balking." Others, more realistic in their tendencies, favour government continuing with its assistance to the present driver, and developing more considered ways of helping to cross the difficult spots in the road.⁸ Meanwhile, the question has been promoted from the realms of speculation to seek its answer in actual experiment in progressive countries. Generally speaking, it may be said that the practical difficulties of forward planning and financing rising out of our systems of government with their sequence of opposing parties in power, together with the inability of our people to concern themselves with the distant future, have done much to block competent government action along these lines.

Unemployment Insurance.—The second social device for relieving the workingman from his absolute dependence upon employment in private industry is that of unemployment insurance. As a recipient of benefits derived from a fund in which he himself has had a hand in the building, he is guaranteed a living when out of work without being forced to rely on charity. Under the system in Great Britain the fund is created from equal contributions from

⁸A positive spokesman for state assumption of responsibility for full employment is Sir William Beveridge. See his *Full Employment in a Free Society* (London, 1944).

worker, employer, and the State. All mature male workers pay the same flat rate whether they are high wage men or low. Women and youths pay a little less. The benefits, likewise, are paid in the same amount to all mature males, regardless of the type of workman, when they become unemployed, and a slightly smaller amount is paid to women and to young persons.⁹ Additional provision is made where there are children or other dependents in a family. Thus, in 1939, a man with a wife and two dependent children received 17 shillings per week on his own account, 10 shillings for his wife, and 3 shillings for each child, which, added together, is equivalent to about \$8 for this family of four. Benefits are limited to twenty-six weeks in one year but "additional days" are allowed under prescribed circumstances. The Act is administered by government officials in close association with the employment exchanges. Unemployed persons ineligible for insurance benefits are provided for under the Unemployment Assistance Scheme.

Under the German system, which was developed some fifteen years later than the British, and presumably stood to benefit from the experience of the latter, contributions were confined to employers and employees, and put on a fifty-fifty basis. The government took no responsibility in this respect. Moreover, contributions were scaled as a percentage of wages, each worker paying, in 1931, 3½ per cent of his wage. Similarly, when it came to receiving benefits the recipients did not get an equal sum as in Britain, but were paid according to a graduated percentage scale varying with wages, the highest priced workers getting 35 per cent while the lowest received 75 per cent of their respective wages. The outstanding points of distinction between the two systems are (1) the presence of government as a contributor in the one case and its absence in the other, and (2) the attempt to recognize and uphold in the German law even in unemployment the different standards of living by means of the differential rates, whereas mere minimum relief for all alike appears to have been the main purpose in the British Act.

The system that has developed in the various states in the United States is very different again from either of the above. There the employer only contributes. Furthermore in accordance with the system of "merit" or "experience" rating, the rates of different firms vary, based upon the amount of unemployment

⁹Benefits, however, for those employed in agriculture are 15-20 per cent lower and contributions only half as heavy. Agriculture was added as a separate category in 1936.

they have had in the periods immediately preceding. While they pay into a common state fund, each employer is interested in maintaining a steady work force through each year in order to keep down his contributions in the future. Within this general pattern the various states differ in the detail and liberality of their laws and considerable experimentation has taken place.¹⁰ Experience rating, it should be noted, assumes the ability of the individual firm to maintain employment.

Action in Canada with respect to unemployment insurance was delayed by constitutional difficulties. Jurisdiction in this field under the B.N.A. Act lay with the provinces and some gesture of federal subsidizing or other stimulation like that of the United States was the only way open to the Dominion government. The act of June, 1935, in which the latter presumed jurisdiction, was declared unconstitutional a year later. Action thereafter further waited upon a much heralded pronouncement redefining the boundaries between Dominion and provincial authority in such matters. All students of the problem agreed that unemployment insurance was a matter requiring federal operation and control. They were equally agreed furthermore that legislation was long overdue. Finally the desired change in the constitution was effected July, 1940, and shortly the new bill was brought forward and passed.

Briefly the Canadian system, which began collecting contributions in July, 1940 and paying benefits a year later, may be described as follows:

(1) It calls for contributions from three parties, employers, employees, and the state, the two first in amounts approximately equal for the whole country while the government adds one-fifth of their aggregate and assumes the whole cost of administration.

¹⁰The federal government, seeking to stimulate unemployment insurance among the states and to hold up standards, passed its Social Security Act in 1935 whereby it levies a tax of 3 per cent on payrolls of all employers of 8 or more workers, but allows credits up to 90 per cent of the tax for each state having a system of insurance capable of meeting federal standards. Details as to benefits, waiting period, etc., are left to each state. Within two years all forty-eight states had enacted laws satisfactory to the federal Board. A few of these at first required employee contributions, but later they dropped this feature as out of accord with the operation of experience rating. The majority require benefits equal to 50 per cent of wages, with maximum and minimum absolute limits. See Florence Peterson, *Survey of Labor Economics* (New York, 1947).

(2) Benefits depend on the fulfilment of four main conditions, viz., (a) Payment of not less than 30 weekly (or 180 daily) contributions within two years, (b) proper presentation of claim and proof of unemployment, (c) that the contributor is capable of and available for work, (d) that he has not refused to attend a course of instruction if required. Benefits are denied where the unemployed condition is due to misconduct or participation in a labour dispute or to refusal to accept suitable employment.

(3) Contributions and benefits vary with the wage rate of the worker according to the following complex arrangement by classes:

TABLE XXXII
CANADIAN UNEMPLOYMENT INSURANCE CONTRIBUTIONS
AND BENEFITS BY CLASSES*

Class No.	Description of Class of Employed Persons	Weekly Benefits		Weekly Contributions	
		Single Persons (dollars)	Persons with Dependents (dollars)	Employer (cents)	Employee (cents)
0	under 16 years, or earning less than 90 cents a day.	0	0	9	(paid by employer)
1	earning 5.40 - 7.50 a week	4.20	4.80	18	12
2	" 7.50 - 9.60 "	5.10	6.30	24	15
3	" 9.60 - 12.00 "	6.00	7.50	24	18
4	" 12.00 - 15.00 "	7.20	9.00	24	21
5	" 15.00 - 20.00 "	8.10	10.20	24	24
6	" 20.00 - 26.00 "	10.20	12.90	30	30
7	" 26.00 - 34.00 "	12.30	15.60	36	36
8	" 34.00 or more "	14.40	18.30	42	42

*It will be observed that the benefits are adjusted to preserve in some measure the normal standard of living of the insured; that the benefit in each class is equal to forty-five times the worker's contribution less 10 cents a day if he has dependents and thirty-four times exactly if he has not; and that nothing additional is added for more than one dependent.

(4) Further features are that no benefits are allowed for the first nine days of unemployment, and the total payment of benefits is related to the employment history of the insured individual, a man being permitted to draw one payment for every five contributions made in the previous five years, less one payment for every three benefit payments received in the previous three years. Thus only one who has worked steadily for five years preceding loss of employment could draw weekly benefits for a whole year. Like

all such legislation the Canadian Act does not cover all employees under contract but excludes, among others, workers in agriculture, forestry, fishing, stevedoring, private domestic service, and persons earning more than 3,120 per year.

It would take us beyond the scope of this book to attempt a discussion of the merits and demerits of these different types of insurance. The subject involves not only ideas of social justice as between contributors and recipients, but also questions of shifting the burden of contributions to consumers through employers adding them to the prices of products, and others having to do with stabilization of the economy through transfer of purchasing power. Many intriguing questions indeed come to mind as we examine the various types—questions such as: Should insurance aim largely at unemployment prevention or chiefly at relief? In what different ways may insurance reduce unemployment? Viewed from the standpoint of economics who should pay the contributions? What of the benefits: should they be flat, regardless of personal wage rate as in Britain, or should they run as a percentage of wages or in some compromise relation as in Canada? What merit is there in the Canadian prescription of having the employer of low-wage workers pay more proportionally than the employer of high-wage workers? How long should benefits run during a period of continuous unemployment? Is the Canadian system fair to groups like street railway employees who rarely experience unemployment? Are uniform rates throughout the whole nation desirable or should they vary between provinces or states as they do in the United States? What of the working population not covered by the Act?

Relief and Agricultural Assistance.—The third method of government assistance against unemployment is by way of direct relief. The idle citizen is supported as a complete burden to society with the incidence on the taxpayer. He makes no contribution to social wealth. This was our chief reliance in Canada in the late thirties. In September, 1937, the number of persons employed on special works projects and assisted through other undertakings to which the Dominion contributed financially was 18,163 as contrasted with 123,042 persons "fully" or "partially" employable who were in receipt of material aid from the federal Government.¹¹

¹¹National Employment Commission, appendices section, pp. 51-2. In spite of the small proportion offered work, the Commission advised an over-all contraction in the public works programme for 1937-8, p. 21. For explanation of the 752,714 persons receiving material aid from Ottawa, at that time, see *ibid.*, p. 98.

This condition was at variance with Canadian policy in the early thirties when the emphasis was on public works, and with American N.R.A. policy under which two and a half to four million persons were given employment through government action over a series of years. Considerable activity developed also in Canada in 1938-40 in paying farm workers to stay on farms and bonusing farmers to retain their hired help during the winter months even though their need of them was not of itself sufficient to cause them to keep men in their employ.¹² In some parts of Europe emphasis has been laid on keeping factory workers and their families in contact with the land by encouraging small homesteads in the country far from city work centres and providing low-cost workers' transportation facilities between the two.

B. ACCIDENTS AND INDUSTRIAL DISEASES

The second form of workers' insecurity that we are to consider is that arising from loss of income due to accidents and industrial diseases. The nature and extent of these we have already examined in connection with our study of waste and the loss of potential wealth due to their presence in industry in the productive process. Attention has also been given to social measures directed toward their reduction. We approach the subject now from the angle of distribution of the loss. We wish to know who bears the burden of it, and in particular we are concerned with it as it affects the injured worker and his family.

Accidents in industry we have seen result in a loss in total product. But to the individual employer the death or injury of an employee may mean little loss. The lost earning power falls on the injured man in the first instance and not on him. The place of the departed is filled by another from the labour market. More or less impairment of efficiency results while the newcomer is becoming acquainted with the details of his task, the more or the less depending on the nature of the work. But, considered from the standpoint of industry as a whole, assuming full employment of population, accidents are to be regarded as a subtraction from the total stock of one of the factors of production. The marginal importance of that factor, labour, is strengthened and theoretically a larger pro-

¹²See Unemployment and Agricultural Assistance Act, 1938. The established method of federal assistance is through "grants-in-aid" running usually from 30 to 35 per cent. Extra aid has been extended to the Western Provinces for drought areas.

portion of the total product will be coming to labour. While labour loses with the rest of society through the shrunken dimensions of the total product, it gains through receiving a larger percentage of the total. Practically, however, apart from social protection, the economic wrong to the injured groups is far more evident. Our attention centres, therefore, not on totals, but on losses in the particular. Only as a guide for evaluating the legislation that we are soon to consider are we interested here in the matter of factorial proportioning of the loss. Injuries come to the individual, and the financial burden, if allowed to rest there, is a different thing from the same absolute burden falling on labour in general. It is economically unsound that it should rest there, viewing it from the standpoint of consumers' satisfaction as well as from the angle of subsequent efficient production. Let us then get back on the trail of workers' insecurity, as it arises from this source, and examine the trends in social action with respect to it as expressed in legal decisions and parliamentary statutes.

Relating itself to a background of simple industry, the attitude taken toward accidents was until recently that they were generally ascribable to somebody's carelessness, but if not, then the worker took the risk of them when he took employment. The presumption, in the first instance, was that the carelessness was most likely to be that of the worker himself, and the financial loss of impaired earning power as well as the physical distress of the injury fell to his lot. Remedy was allowed him, however, at law. By initiating legal action, he might, if his case was sufficiently good, show that blame attached to the employer, and collect an amount sufficient in the judgment of the court to dispense justice to both parties. The odds, however, were strong against his chances of recovering any considerable share of his loss. He had to sue his employer, an act which was not only liable to result in unfriendly relations, but calculated frequently to interfere with his getting employment in the future. Once action was taken, the whole burden of proof was on him, and witnesses that he might call were on the defendant's payroll. Moreover, the employer was in a strong position at law. If the accident were shown to be due to the negligence of a fellow workman of the injured, he was absolved; if there were any evidence of negligence on the part of the plaintiff himself, the same was true. All the employer had to do was to show in defence that he had exercised "reasonable care" in regard to the safety and hygiene of his place of work.

The result of this situation came to be that those who suffered accidents recovered very little of the financial loss from anyone. Suits against fellow servants who might have been at fault were uncommon. Suits against employers were unprofitable. Litigation was slow and expensive and the uncertain winnings had to be shared with lawyers. As industry became more complex and built on a larger pattern, accidents became more common and injustice developed apace. Doctrines of attaching blame to fellow servants scarcely apply to most accidents in big present-day factories. Still less do ideas about contributory negligence. Rather, where rapidly moving machinery is involved, accidents are known to bear a relation to fatigue and we are coming to see them in these terms.

The time came when it was brought home to public opinion that these older ideas involving placement of blame, assumption of risk in taking employment, and risks being compensated by the higher wages paid in dangerous trades—whatever had been their merit at an earlier time—had become quite inapplicable to modern industrial conditions. A fresh start was needed and it came with the beginning of the twentieth century, based upon a new outlook and a new philosophy. Legislation was resorted to.

Workmen's Compensation in Canada.—Workmen's compensation legislation is general in Canada today. Here, as in the United States, the matter is one of provincial or state, rather than federal, jurisdiction and consequently the laws lack uniformity. Reference to one province will suffice, however, for our purpose. The province of Ontario paid out in 1946 upwards of sixteen million dollars as compensation and medical aid to 168,767 beneficiaries. The industries of the province with a few exceptions are required to pay into a common fund, but are divided for insurance purposes into twenty-five classes each of which is treated as a self-supporting unit as between contributions and benefits. Within each class the employers of different occupations are assessed at different rates in accordance with the past experience of each occupation. Thus, in class 17, employers of weavers of various types paid 75 cents per \$100 payroll in 1947 as against 50 cents for spinning yarn and \$1.50 for manufacturing shoddy or cotton waste. Employers of men sinking shafts in mines paid \$7.50. Merit rating for individual firms, though retained in the Act, was dropped in 1938 as impractical in operation and contrary to insurance principles. The administration of the fund is vested in a Workmen's Compensation

Board, a publicly appointed body of exclusive jurisdiction and final authority, to which all accidents are reported and whose duty it is to take action at once in providing benefits for the injured one. Coverage is general except for agricultural workers and domestic servants. Benefits amount to $66\frac{2}{3}$ per cent of wages in the case of total permanent disability and in the case of partial disability they equal $66\frac{2}{3}$ per cent of the reduction in earning power. Under Workmen's Compensation statutes, injured workers do not have to sue their employers. It is assumed that risk is inherent in industry and no social end is served by raising the question of whether employees are negligent or (with some qualification) whether the employer is to blame. With rare exceptions workers will not deliberately allow themselves to be injured, and activities of accident-prevention associations and inspectors carrying out the instructions of factory laws are relied upon to ensure that the employer is exercising reasonable care in providing safe conditions of work. The philosophy involved in the new approach is that of social welfare as well as justice and the method is one of inexpensive expedition. It is assumed that welfare is not served by allowing injured workers to carry the whole financial burden of lost earning power, but that a large part should be placed elsewhere; it is assumed further that it is better that compensation should be definite, quick, and relatively automatic and certain. Most laws again have seen fit to place the whole responsibility of paying compensation upon employers, and to socialize the risk through joining them together in developing common funds out of which payments are made. Furthermore, most laws have included within their scope diseases attributable to industry for loss in earning power owing to the disease. It will be noticed from this that the other $33\frac{1}{3}$ per cent of the loss still falls on the worker, which principle is followed in all laws.

There can be no doubt that Workmen's Compensation is an improvement over the older method both from the standpoint of justice and sound economics. Injured men and their families receive many times what they did on the average; the expensive labour of lawyers, economically unproductive here at least, is avoided; the burden of cost is lessened through being re-allocated and distributed. (It is said to amount to a little more than 1 per cent of the payroll on the average and, therefore, to only a fraction of 1 per cent of total costs of production.)¹³ Even though this cost may eventually come

¹³For details, see J. A. Estey, *The Labor Problem* (New York, 1928), p. 325.

largely out of the workers through reduced wages, as some have claimed it does, or through higher prices in the goods they buy, nevertheless the purpose of increased total utility is served. Finally, the cause of prevention is advanced.

C. INSECURITY DUE TO SICKNESS

Nature of the Problem.—In Chapter v, it was made plain that in sickness we find one of the great standing handicaps to effective production. Here our emphasis is to be on its ravages upon human happiness and particularly upon the economic aspects of these as they affect the masses of the people. For while it is true that disease is no respecter of persons and forces its visitations upon rich and poor alike, it comes to the working homes more frequently, and, while there, not only lays its hand on the body of the particular victim, but also steals away much of the economic resources which mean life and enjoyment to the family. Social workers find very frequently that sickness is the cause of a family's poverty. Debts are contracted on account of it that may not be overcome. Discouragement and continuing misery result. Children that otherwise would be making their preparation for life are insufficiently supported for that end. They enter the competition handicapped and poverty extends to a second generation. In a word, the amount of sickness and the economic burden of its presence are alike increased because the incidence of the burden is uneven.

Prevention.—The remedy for sickness is health. What proportion of our sickness is due to undernourishment, what part is due to inadequate medical service, and what portion attributable to causes beyond our reach at the present state of our resources and science, we do not know. The evidence, however, supports the belief that much that now exists is preventable. The disproportionate amount of ill-health among the poorer classes; the knowledge that a high percentage of incomes fall short of the sum necessary to support a health and decency budget; the failure of medical service to distribute itself fairly under our present individual fee-charging system; the comparative idleness of many practitioners while thousands in ill-health go unattended, all these point to failure to realize the most from what we have. To the degree that sickness is due to undernourishment the deeper-lying explanation for its existence is the fact of inequality, and the remedy rests in the latter's reduction and more directly perhaps on measures for social feeding.

In so far as it is due to inadequate medical attention, the way to improvement would seem to be a change in social arrangements with respect to dispensing this service. The traditional way of "medicine" is for the doctor to call after the disease is well under way, the delay being due to the fact that initiative must come from the patient, and the latter is motivated for financial reasons not to call the doctor until he has to. We are only beginning to see that service should precede or forestall sickness as far as possible: that preservation of health is cheaper and better in every way than the curing of diseases. Various gestures are now being made in other countries in the direction of reorganization with this general aim in view. The social approach also contemplates more effective units for dispensing service than that composed of the individual entrepreneur-doctor. In Canada no such general experiment has been made although social action has been taken for limiting the spread of certain germ diseases such as smallpox and scarlet fever, and more positive methods aiming to check the effects of tuberculosis and diabetes have been adopted, the cost being charged to public account. Local health officers again have certain responsibilities with regard to school children. A recent private study in the United States by the Committee on the Cost of Medical Care resulted in a recommendation for the organization of the population into regional groups, each large enough to occupy the attention of a complete medical unit consisting of standardized hospital and equipment, together with necessary doctors, nurses, dentists, pharmacists, and other associated personnel. The purposes of such organizations would be both preventive and therapeutic, and the costs would be met through some arrangement of contributions by the members of each group after the manner of insurance premiums, or through the use of taxation, or possibly both.

Altogether it seems to be true in both Canada and the United States that people are coming to realize the inadequacy and waste of our present arrangements for taking care of the general health. There is a diminishing utility in the consumption of medical services as well as with other goods, and consequently a presumption for thinking there is a comparative waste in the use of doctors when their attentions are centred on some groups to the neglect of others. The times are probably shaping toward new developments of some kind.¹⁴

¹⁴See "Health Services and Health Insurance in Canada" (*Labour Gazette*, vol. XLVIII, p. 711); "Health Security Legislation in the United States" (*International Labour Review*, vol. LVII, p. 26).

Insurance Against Sickness.—In the foregoing we have been considering sickness and methods of dealing with it as applied to the whole population, the argument being that through social attack the amount of sickness would be lessened and the economic burden of medical costs reduced through better distribution. We are now to consider the methods of sickness or, more properly, health insurance. Health insurance applies normally only to wage-earners and is calculated to give protection to the industrial worker for sickness contracted while an employee in a business enterprise. It is patterned after the general model of all social insurance, involving the building up of a reserve through contributions and the right to receive benefits when illness comes, with its accompanying loss of earning power. Though connected in a sense with industry it is not to be confused with the compensation for industrial diseases which is operated under Workmen's Compensation laws. In the latter the illnesses are directly ascribable to the nature of the work, whereas, with health insurance, no such connection is suggested. Usually, in the great compulsory schemes at least, the contributions are provided by the insured person and the employer and (sometimes) the public authorities. In most countries the rate of benefit is proportionate to the standard of living of the worker. Generally, protection is afforded to the worker's family as well as himself and includes drugs and medical service in addition to the cash benefits.

Brief reference to the German system, as an illustration, will serve to make the picture clearer. Dating back to the days of Bismarck it was extended by amendments to cover practically all workers. Cash benefits, while allowing for some elasticity among the different "funds" arranged for in the Act, amounted to not less than 50 per cent of the basic wage nor more than 75 per cent, and were payable from the fourth day of sickness up to the end of twenty-six weeks. After that time the person, if still sick, entered on what was called invalidity, or permanent disability benefit. Medical treatment and appliances were allowed and hospital treatment if necessary, but in the case of the last-named a reduction in cash benefits was made. In cases of maternity confinement sickness benefits for approximately twelve weeks were paid along with medical care and a small lump sum cash allowance. In building up the funds the contribution was shared between the employee and the employer in the proportion of two to one, the latter being responsible for turning in the payments. The total income from

contributions during 1928 was \$465,100,000 and the benefits paid out amounted to \$411,700,000. It is plain that this was a gigantic example of mutual aid. It meant the redistribution of the financial loss due to sickness on a grand scale.

Sickness insurance, as provided by law, is general among European nations. It has until recently made little appeal on this continent.¹⁵ We have our voluntary insurance arrangements carried on by trade unions and fraternal societies for the benefit of their own members. We likewise have sickness coverage offered as an incidental by most of our life insurance companies. There are various schemes again fostered by individual firms some of which run to large proportions. The financing of these last may be carried on within the company itself with both parties contributing, or it may be done through arrangement with insurance companies in what is known as group insurance.¹⁶ It will be seen that the incidence varies among these different schemes. So also does the adequacy, and the types of people covered. Certainly they fail to reach the ideal of general coverage of all working people that is aimed at by the state systems. Still more do they fall short of that complete mutuality of a people in meeting the financial burden of ill health which we have stated to be in keeping with the requirements of a nation's most economical living.

D. OLD AGE DEPENDENCY

The last major form of economic insecurity with which we have to deal is that arising from dependency in old age. In a well-planned life, the expectation is that enough savings shall be laid by during the working years, either in the form of income-earning property or available funds, to meet the normal requirements of the declining period. In actual life among our wage-earning classes this ideal is largely unrealized. For the great majority wages are inadequate to permit of any considerable savings; the years of regular earning are often cut short at middle life; such savings as have been made are frequently sacrificed through sickness, depression, or unemployment. Reliance upon the family institution to provide a place for the elderly members within the security of the common home is passing with the agricultural economy of our fathers and grand-

¹⁵See H. M. Cassidy, "Canadian Social Services" (*Annals of the American Academy of Political and Social Science*, Sept., 1947, p. 195).

¹⁶For details for Canada, see *Report of Select Standing Committee of House of Commons on Industrial and International Relations*, March, 1928.

fathers. While old age, therefore, may be anticipated as the normal expectation of life, and most people viewing it through the eyes of youth and strength do not look forward to meeting it without provision, the complex of economic dangers that beset the path *en route* make its security very problematical.

Yet the economic ideal requires that comforts should surround the declining years of life, and the society that leaves its old people without some command over these is falling short of its responsibilities. The case cannot be argued from the standpoint of productive loss, as with the other forms of insecurity that we have studied, but it can be supported strongly from the angle of consumers' loss. Lacking guarantee of adequate provision for it by individual saving, old age should be made secure by social action.

Two separate leads to this end have come out of Europe. The one is the German method involving a regular form of social insurance machinery. Employers were required to see that every employee over sixteen years of age had an old-age card and stamps were purchased from the Government, worker and employer each paying half. The Government, furthermore, contributed a subsidy. Similar in principle are the old-age insurance arrangements in the American Federal Security Act. As amended in 1939 they contemplate monthly benefits for workers over sixty-five arranged in schematic relation to average monthly wages during the period of contribution and also in relation to the number of years over which contributions have been made. Funds are derived from contributions of 2 per cent of monthly wage of each worker, half to be withheld from the wage and half to be paid by the employer. This is to be raised to $2\frac{1}{2}$ per cent in 1948 and 3 per cent in 1949. Benefits began to be distributed in January, 1940, and cover wives and children under sixteen as well as the workers themselves. It is administered by the federal Government without co-operation by the states and, although contemplating self-sufficiency in the course of time, is, during its earlier years, heavily subsidized. Benefits will vary from \$20.60 to \$85 a month.¹⁷ Thus, the economic burden of old age is distributed over the whole society, and equalized also so far as the individual is concerned across his entire wage-earning years.

¹⁷Old age insurance is not to be confused with old age assistance provisions under the same Act by which the federal Government matches expenditures by the state Governments for their needy aged, dollar for dollar up to \$20 a month, thus making possible a pension of \$40 per person.

The second lead came from Denmark, and via Great Britain the system has found it way to Canada. It takes the form of a direct pension from the Government with no contributions from elsewhere. The Dominion Government passed what may be called an enabling Act in 1927, its functioning in the various provinces being made contingent upon the action of the provincial Legislatures. According to the original offer one-half of the financial burden was to be met by the federal Government, the remainder by the province, but by an amendment of 1931, the Dominion agreed to increase its share to 75 per cent. The provinces have all passed laws taking advantage of the offer. By the terms as now amended, the applicant must be a British subject and must have resided in Canada for the twenty years immediately preceding the date proposed for the commencement of the pension. He shall not have an income in excess of \$425 a year and may not have made any voluntary assignment or transfer of property for the purpose of qualifying for the pension. The maximum pension payable is \$300 yearly and this is subject to reduction by the amount of the income of the pensioner in excess of \$125 a year. Applicants become eligible at seventy years of age.

This system may or may not be considered social insurance. It means a direct burden on the taxpayer. It may be defended from the standpoint of justice by the argument that a man who has given industrial service to his country for a half century has earned a claim to continuing use of existing wealth to meet his necessities for the rest of his life. It may be defended again from the angle of economic theory as explained above. Doubtless, the real reason for its use in various countries, in preference to contributory insurance, is that it is so much cheaper to administer. It is criticized in some quarters, sometimes as leading to concealment of private income, at others as causing the pauperizing of the less thrifty elements of the population. Its bearing upon stabilization through the transfer of \$60 million a year from public funds to the needy aged is doubtless of some importance.

CHAPTER XXX

LABOUR PROBLEMS; TRADE UNIONS AND STATE CONTROLS

Wage Problems.—There are a number of problems in addition to those we have dealt with that beset the living of those who are dependent upon the sale of their labour and prevent them from realizing a satisfactory condition of life. First, there is the problem of inadequate wages. It is one of the darker strands in the economic history of the last century and a half that wages have been unnecessarily low. It is reasonable to assume that the great gains in productive capacity associated with the Industrial Revolution should have brought a better basis of economic living to the masses of mankind engaged in labour. The explanation of its failure to do so is found in the analysis of changing demand for working people, in the vast increase in population thus keeping full the labour market, in the displacing of workers from many tasks by machinery, and in the transfer of much of the wealth increase into capital forms and into consumers' goods intended for the consumption of more favoured propertied persons. After 1850 there developed, furthermore, greater differences in wages among different groups until in the eighties and nineties definite sections of labour were beginning to be referred to as "sweated" and "ordinary," whereas at the other extreme an "aristocracy" of labour was coming to the front among railwaymen, building trades workers, printers, etc. With the present century these differences have continued though new alignments have taken place.

With the pressing demand for labour associated with the need for all-out production of war material beginning in 1940 new aspects of the wage problem made their appearance. First, the sudden need for large numbers of particular types of labour put the few prepared in these techniques in an abnormally favourable position. Secondly, the strong position of labour in war industry generally and the consequent threatening increase in labour costs caused employers to hesitate to accept orders for goods essential to military success. Thirdly, it was feared that the imminent rise in wages

would be a factor in bringing inflation of a type injurious to the national economy. This emergency situation gave rise to a set of state controls different in purpose from earlier types. We began to hear about wage "ceilings" rather than "floors" as formerly. It was demonstrated that wages are subject to social control at both extremes and that intelligent attack upon the problem does get results.

Long Hours of Labour.—Hours of labour apparently have always been long. In the colonial era of this continent they were limited only by the conditions of light. The first appeal for reduction coming from organized journeymen came shortly before the close of the eighteenth century and took the form of a request for compulsory limitation of the day to twelve or fourteen hours. At that time fifteen and sixteen hours were not unusual. The great hardship of the long work day must not be thought of entirely in terms of time. It is long hours plus monotony and intensity that constitute the whole count in this connection in modern industry. In an agricultural economy hours may be redeemed by variety of activity, the out-of-door atmosphere, and a measure of sociability. Certain compensating features likewise probably characterized the long day's work in the seventeenth-century townsman's shop. Life was being lived in its many sides in and around the master's dwelling. But the retrograde step was taken when, with the Industrial Revolution, it was taken for granted that the same length of day was to be the lot of the worker amid the speeded and noisier and more demanding conditions of a machine age factory. Here there were no features making for variety or welcome social interruption. The day was steady and hard and before its close came exhaustion. The beginning of the nineteenth century witnessed the extremes of human exploitation through long hours in Great Britain and in the young factories elsewhere; and throughout the century and into the present one there was sounded an ever-recurring demand for reduction. The battle for the ten-hour day in the building trades in the eighteenth-thirties was followed by the wider drive for the nine-hour day of the sixties and seventies. The American Federation of Labor from its beginning in the eighties set out to achieve the eight-hour day for its organized membership through collective bargaining. This end was only achieved, however, by certain advanced trades in the years just preceding World War I, while others had to wait until the war period itself. Most organized trades by 1930 had been able to improve this with the release of Saturday afternoon, which meant

a forty-four hour week, while large sections of the clothing, building, and automobile industries had achieved the five-day forty-hour week. War caused a return in some instances to longer hours but soon after its close labour opened a drive—only partially successful—for the forty-hour week covering many industries.

The arguments put forth in favour of shorter hours have varied from decade to decade. The early argument, running *pari passu* with the acquisition of the suffrage by the working classes, was social and political, stressing the importance of a measure of leisure as being essential to citizenship, family life, and cultural requirements. Later, emphasis came to be placed on the economic arguments, (1) that the shorter day does not necessarily result in lessened output in the long run because workers are more alert and painstaking, and (2) that the use of the long-hour day in a machine economy is the cause of unemployment since there is only so much work to be done and it is too soon completed. Combined with this went the assertion that leisure itself increases consumption and thus helps to prevent stoppage of industry. Most recent of all, perhaps, has been the refinement of early arguments against exhaustion of the worker, through scientific studies in physiological chemistry. These have revealed the true nature of tiredness and exhaustion in terms of poisoning and loss of cellular strength, and pointed to their somewhat necessary relation to accidents and disease.

Opposing the shorter day employers have argued (1) the loss of productivity, especially in relation to continuous overhead costs, and (2) the misuse of leisure when placed at the disposal of those who are unaccustomed to it. Chiefly, however, in recent decades the economic argument has been stressed. Industry could not afford the eight-hour day, especially where goods had to enter foreign competition.

Space does not permit us to weigh these arguments in detail. We can only affirm what we have already said, viz. that economic theory viewing the matter from the standpoint of consumers' satisfaction requires a fair portion of leisure to give pith to the enjoyment of goods, and that, negatively, life's values are reduced through overly long hours of exhausting work. The case for productivity, which has been argued by both sides, doubtless must be settled through close examination of different industries. There is reason to think that an eight-hour day might result in as much product in some industries where muscular strength and mental alertness are at a premium as a ten-hour day, while in others where other circum-

stances govern the pace, it would fall far short. In wartime the system of two or three shifts took care of the losses through idle machinery.

The advance to shorter hours has come partly through legislation, affecting in particular children, women, government workers, and employees in dangerous and very responsible callings; partly through deliberate action of progressive employers; but mainly, so far as adult male workers are affected, through the forceful bargaining of organized labour itself. That the latter is true will be appreciated by comparisons between the hours enjoyed today by trades controlled by strongly organized unions and those where individual bargaining still obtains. In the United States, federal legislation, passed in 1938 and directly affecting twelve million workers, aims at making forty hours the maximum working week. In Canada, Ontario and the three most Westerly provinces have 8-hour day laws affecting factories, mines and shops, whereas Eastern provinces have no laws affecting adult males. Actually hours vary considerably among industries and geographically but the gaps are narrowing with the extension of trade unions.

Before leaving this topic we might venture the opinion that there is something to be said in favour of the "flexible week" in the interest of ironing out another rigidity of our system which emanates from the employer-employee relation as it stands. In the agreement between union and employer, arrangements might be made to vary hours between certain limits in keeping with the condition of the business, a compromise being effected about the remuneration for hours of the full day, as named in the upper limit, during which the employees may not be working.

Conditions of Work and Control Over Them.—The expression "conditions of work" is a blanket phrase covering especially the physical environment of the worker while on the job, but reaching beyond this to the relations with fellow workers and foremen, the manner of payment, promotion and discharge, arrangements for dockage in connection with spoiled work, appointment of weighers or measurers where piece work is involved, arrangements for the employment of apprentices with respect to training and limitation of numbers, etc. In some trades of a dangerous nature much attention centres around the subject of safety and the appointment of examiners. Mine workers are concerned that their places shall be examined within a specified time before they go to work and that examiners shall be certified officials. Cotton mill operatives are

solicitous about the atmospheric conditions of the plant. The time was when the conditions of work were not a subject of controversy since the master employer was subject to them as well as the journeymen and relations were direct between employer and employee. Rules regarding apprentices, furthermore, were laid down for the whole trade in the guild regulations. But with the development of the factory and the coming of the corporate order, all this has changed. Workmen were separated from owners and their respective interests in these matters drew apart. The latter became interested in cheapness, the former in a fair amount of expense. Relations became impersonal, the workers being subject to the hired officials of the owners. Naturally, the struggle was opened by the workers to secure new devices for controlling in some degree the conditions of work. Progress has been made in part through legislation. Protective mining laws and store and workshop acts have become a substantial part of the social legislation of our different provinces and states. In large degree these have been won, however, through the continuing efforts of organized labour. Development has come first through trying to interest employers in granting improvements, and this failing, or the execution proving unsatisfactory, carrying the various matters one after another to the legislatures and having them made compulsory. Much yet remains however, uncovered by legislation, which is still subject-material for collective bargaining and the formal trade agreements between the great international unions and the various employers which set forth the minimum conditions in great detail. In most cases grievance committees have been set up, to represent the workers in interpreting the collective contract.

Lack of Self-direction and Expression.—Distinction should be made again between controlling the conditions of work and having a voice in running the business. It will be appreciated that there is an element of overlapping as between the two and yet there is a complete difference in intent. The one seeks to provide a secure and sanitary place of work and satisfactory human relations while the other is concerned with shaping the production and marketing processes with an eye to a worthy salable product. The worker, it is now necessary to add, is not without interest in assisting with the planning of production itself. How much he is interested it is impossible to say. Probably more has been made of this than is actually warranted in view of the workers' limited consciousness of any lack in this respect at the present time. It is, perhaps, in some

measure a creation of scholars of idealistic inclination, who lament the elimination of all self-expression by the requirements of modern industrialism, and are ambitious to redeem some of this lost ground for the worker through allowing him a chance to exercise creativeness once more through constructive planning. No doubt there is merit in the point. It would be a shallow view to regard high wages, even if accompanied by short hours and regular employment, as a complete solution of the labour problem. Workers can never be at their best, nor can they be fully content, until they derive pleasure from their work and until they can experience that human sense of dignity that goes with a measure of self-direction and natural expression of sociability as they apply themselves to the daily task.¹

Considerable attention has been paid by progressive employers to this matter in the period since World War I. *Shop committees* and "parliamentary assemblies" to stimulate workers' interest in the business have been developed under the leadership of *personnel managers* who are themselves liaison officers between workers and executives although responsible to the latter. Workers' "suggestions" have been sought through established channels. In a few instances in the twenties—notably with certain railways—the regular unions were featured in the planning machinery through a broader, more trustful development known as "union-management co-operation." Here systematic co-operation between unions and managements for improved service, elimination of waste, and increased efficiency was attempted. During World War II this was expanded, and, under the stimulus of the Dominion Government, labour management production committees were set up in many industries.

The Labour Movement.—Impressed by the effects of the conditions under which they laboured and failing under the wage system to improve their lot by acting individually, workers have seen fit to draw together and seek delivery through united action. Beginnings of common activity in the eighteenth century were spasmodic and temporary, association developing to deal with particular situations. In the nineteenth century and particularly after 1850 came more permanent organizations with regular programmes and policies. The labour movement embraces both industrial and political action. In Canada and the United States both functions are carried on for

¹Bertrand Russell, *Proposed Roads to Freedom*, chap. iv. Elton Mayo, *Human Problems of an Industrial Civilization* (New York, 1933).

the most part by the same organizations. In Europe and Australasia the unions and political organizations are separate and distinct though operating usually in mutual helpfulness and embracing a majority of common members. There are, however, many members of the Labour party in Great Britain who are not trade unionists. The object of political activity, through whichever form it may find expression, is legislation favourable to labour. The labour movement expresses itself also on the consumption side through the co-operative societies.

The Trade Union.—The labour union or trade union as it is more frequently called has become an important part of our economic organization. No portrayal of the latter would be complete without giving some attention to it. At the present time it embraces approximately fourteen million wage-earners of the United States and 830 thousand in Canada. The influence of organization, furthermore, extends beyond actual members, affecting as it does the standards and conditions of all workers who directly or indirectly come into competition with union labour. It has been pointed out that the movement toward organization can only be explained in terms of natural causation. "No useful knowledge can be gained about trade unionism," writes Dr. E. S. Furniss, "nor any sound judgment be passed on its social utility, if we assume that it is the artificial creation of a few leaders, or an expression of the natural perversity or original sin of mankind. That these viewpoints are unsound is demonstrated by the extent to which the movement has spread over the modern world, following the path of the Industrial Revolution. The appearance of trade-unionism in any country is historically connected with the industrialization of that country. Springing up first in England, it arose independently in each of the countries of Europe, in the United States, and in every other country where the factory has established itself."² More specifically it may be conceived of as brought into being as an answer to all the evils that we have described in the earlier part of this chapter, viz. low wages, long hours, bad working conditions and complete monopolization in the hands of the capitalist. It came with the breaking down of personal relations and the unequal effects of competition on the two sides of the labour market when capital began to be centralized and production operated on a grand scale. The trade union may be defined as a permanent association of wage-earners, having for its purpose the maintenance and improvement of their

²E. S. Furniss, *Labour Problems* (Boston, 1925), p. 224.

remuneration and the conditions under which they work. It does not exist for the benefit of society. Primarily, it is organized to uphold the interest of the worker against that of the employer. It is necessary that the student should see trade unionism in these terms, viz. "that it arises from the common interests of wage-earners and expresses their viewpoint, feelings and attitudes"; that "it exists to further the interests of wage-earners as wage-earners see them."³ Misunderstanding may arise from the perfectly natural fact that most of us cannot visualize the life and work and insecurity of wage-earners and hence we fail to comprehend their attitudes and activities.

Collective Bargaining.—Foremost among the activities of most unions is the practice of united or collective bargaining. From the beginning of the movement, workers have seen the necessity of strengthening their position for bargaining through united action. Individually, the worker is no match for the employer in modern conditions. His knowledge of the market is too scanty, his ability to withhold his service too limited, and the conditions of competition among workers too keen. Through organization and through agreement that no member shall accept less than certain minimum conditions, workers are enabled to treat with the employer through their chosen representatives on more equal terms.⁴

³J. A. Estey, *The Labor Problem* (New York, 1928), p. 46.

⁴In chapter I we spoke of the institution of contract as a feature of the modern order and remarked that economic society hung together on a web of contracts. The conception of socially effective contractual relations in an area of competition involves the idea that each party has the ability to withhold his commodity as a basis for bargaining. Effective bargaining involves such paraphernalia as reservation prices and each side imposing conditions upon the other in return for points yielded. Socially desirable contractual relations are found where the parties are of somewhat equal strength and equal knowledge of the market, for there the increase in utilities through the exchange is likely to reach its maximum.

The purchase and sale of human services takes place in various kinds of markets. Much occurs at the hands of individual sellers and individual or small company buyers as where a retailer engages a clerk. Hours, definition of the job, and methods may be discussed but often they are a matter of the custom of the trade and as such are implied rather than expressed in a very simple contract. Bargaining usually is confined chiefly to the wage.

A second type operates where large companies engage individual workers where the latter belong to no labour organization. Here the usual condition is that the employer lays down all the terms, including the wage rate. The worker has the alternative of "take it or leave it." Conversely, if a union is a powerful one and an individual or small employer has to employ its members he will have

Objectives.—First in importance are wages and hours. To know what workers of similar quality are getting elsewhere; to keep in touch with indexes of cost of living and to evaluate their accuracy; to define and crystallize new ambitions with respect to standards of living; to challenge employers in their assertions that their profit situation will not support certain rates; to refuse to give in without imposing financial loss on the employer; these are services the union brings to the worker in wage bargaining. Secondly, as unions have carried on collective bargaining they have found it necessary to attempt to standardize the labour cost of employers throughout the competitive market for the product. To raise the wages of one building contractor and fail to do the same with others in the same city would put the first at a distinct disadvantage. To raise the wages of one shoe manufacturer and fail to gain like concessions from a second shoe firm in a neighbouring city or province would put the first at a disadvantage in the competition and would lose employment for his workers. Failure to command the whole area of competition has in many cases spelt general failure for the union, as for instance in that of the United Textile Workers in New England before they had succeeded in establishing collective bargaining in the southern states. This suggests the reason for far-flung organization with many branches. Thirdly, a further purpose and accomplishment of collective bargaining has been to establish a measure of worker control over phases of labour relations which lie beyond wage rates. We refer to such matters as limiting apprentices in relation to journeymen, controlling the order of lay-off in slack times, adjustment of the work load in periods of technological change, and provision for the presentation of grievances. Individual bargaining gives scant protection in these matters, in fact it does not reach them. Apart from union action they are left entirely to the employer, the worker simply accepting them as the working conditions of the job. Thus collective bargaining not only increases bargaining strength, but also extends the content of what is bargained about. It diminishes

to accept the terms as laid down in its rules. In neither case is there bargaining of an effective nature. In both it is an arbitrary imposition of terms upon the weaker party. It is unilateral bargaining. Contrasting with these is the situation where organized workers sell their labour to a strong company. Here there is bilateral manoeuvring, two-sided pressure, and an extension of matters covered. Here also there is presentation of argument by informed and experienced bargainers and representation of the parties.

the area of arbitrary imposition of conditions by one party and increases the scope of the institution of contract. The matters attended to in well-developed collective agreements are many; they vary with the nature of the industry and along with prescriptions for their administration usually cover many pages. A better idea of the real import of collective bargaining in this third aspect will result from examining the different sections of actual agreements. A typical 1946 agreement between the United Packinghouse Workers of America for instance and one of the Canadian companies covers the following matters: (1) Wages, including arrangements for two increases during the year, (2) hours of work, and special rate for overtime, (3) guarantee of a stated minimum of hours of work in each week, (4) paid holidays as designated, and vacations with pay graded as to length according to years of service with the company, (5) rest periods during both morning and afternoon shifts, (6) safety and health provisions, (7) seniority arrangements affecting all workers hired more than six months and governing in some measure both the order of layoff in slack times and the order of promotion, (8) the checkoff (the arrangement by which the employer deducts the union dues from the pay cheque and turns them over to the union), (9) maintenance of membership requirement, and finally, (10) provisions for administration of the agreement itself through use of prescribed personnel and especially the handling of complaints and grievances including a final recourse to arbitration—no strikes or lockouts being permitted during the life of the agreement.

Recognition.—The ambition of unions is to get collective bargaining on a regular and systematic basis. If they can get the employers to "recognize the union" by which is meant that they, the employers, agree to treat with the union representatives and develop agreements, the terms of which will cover union members and, better still, all workers hired in their plants, the situation is much better than where they have to hold their standards through dependence on the loyalty of each man refusing to take work on terms less satisfactory than those laid down in the union minima. The importance of winning recognition is great. Without it the strain on the members is heavy and the existence of the union perilous, particularly in unskilled trades. With recognition an accomplished fact, the expectation is that agreements shall be continuous and renewable from time to time. Employers are not always ready, however, to recognize unions as parties with which

they will bargain. In Great Britain this attitude has largely passed. While the two sides frequently fail to reach agreement and industrial conflict ensues, the employer no longer refuses to meet the representatives of the national union. In America this has not been so generally true. Many employers still hold fast to the practice of individual bargaining while others until recently have been agreeable to meeting with representatives of their own workers exclusively. The regular unions refuse to allow that the latter is real collective bargaining. Collective bargaining according to them involves the right of labour to organize in its own way, apart from the favour of any particular employer, and to select its own bargaining representatives who preferably will not be employees of the particular employer with whom negotiations are being undertaken.

Compulsory Bargaining.—Steps were taken by the United States in 1933 and improved in the National Labour Relations Act of 1935 making it compulsory for employers to treat with the freely chosen representatives of a majority of their workers. To make the latter Act effective the Government appointed a National Labour Relations Board whose functions are to decide what unions shall represent employees in their negotiations with employers, holding elections among them if necessary to determine the matter, and also to deal with cases of unfair labour practices as defined in the Act—notably employers' interference with workers in their efforts to organize and present their representatives for collective bargaining. This Board has led a tempestuous life and has held the attention of the nation almost continuously. By its decisions and activities in court it has placed the force of the law on the side of labour's independent organizations as opposed to organizations of workers fostered by employers within their own plants and has given a decided forward movement to collective bargaining. Organized labour's progress, in fact, since 1933 is a striking exhibit of the effectiveness of economic and political action operating together.

Following this American lead most of the provinces of Canada passed laws announcing the assured legality of unions and requiring employers to treat with them, and somewhat later the Dominion Government by an amendment to the Criminal Code of Canada made it a crime for an employer to discriminate against a man because he belongs to a union. The Canadian Acts, however, provided no special machinery for enforcing their provisions, a most serious omission. In 1943 Ontario and British Columbia

entered a new phase in Canada by setting up special bodies for this purpose, the former introducing a labour relations court having a measure of extra judicial competence and procedure but presided over by judges of the Supreme Court functioning in rotation. The court furthermore could not entertain direct pleading by the parties themselves but could listen only to legal counsel. The act's most important innovation for this country was the provision of a registrar whose responsibility it was to entertain requests for certification as bargaining agents, hold elections to decide between plural applicants if necessary, and beyond that to permit disputes that could not be settled otherwise to come before the court. In December the federal government issued Order-in-Council P.C. 1003 which gave wider geographic coverage to the principle of compulsory collective bargaining and also government assistance in making the negotiations successful. Instead of a court it provided a standing Wartime Labor Relations Board consisting of representatives of employers and employees in equal numbers and an impartial chairman. The Board's function centred in the task of determining who were the proper representatives of the workers in each case whether elected directly by the employees or appointed by a trade union, and in certifying them as such. The act named certain unfair practices that might not be indulged in by either of the parties on pain of penalty. Chief of these as affecting the employer were that he might not discriminate against a worker because of membership or activity in a union and might not refuse to recognize the accredited representatives of the workers or fail to bargain in good faith. As affecting the employees it forbade the use of coercion or intimidation to influence anyone to join a trade union or employees' organization, the practice of any "slowdown" or limitation of production by either of the latter other than for reasons of health, and finally any attempt to organize workers in the plant during working hours unless by consent of the employer.

As an assistance to negotiation it provided that in the event of the parties failing to reach agreement within thirty days, the minister of labour should on the request of either party send in a conciliation officer to help over the difficult points. If he failed to get results he was to suggest to the minister, if he deemed it advisable, to appoint a special board representative of the parties and the public to carry further the conciliation activities which

should report in turn to the minister. The latter might if he saw fit publish this latter report.

The coverage of this act was in its own right confined to industries interprovincial by nature like railways, and to coal mines and war industry. A provision inviting provincial participation, however, led to its acceptance by the provinces with more or less qualification varying with the particular province, and its application to provincial industries through the setting up of regional (provincial) labour relations boards patterned after the National Board, to deal with certification and negotiation within the various regions.

Thus did state endorsement of collective bargaining come to Canada gradually in the light of the American experiment and later became effective and general under Dominion leadership near the close of the War. With the federal emergency powers approaching their end, there is now a bill (No. 338) before parliament providing machinery and distributed authority very similar to that of War Order 1003 and again inviting provincial participation. While purpose and content are closely patterned, a few changes are evidently calculated to take care of points of dissatisfaction contained in 1003. Thus the trade union itself that obtains the votes of a majority of employees in the bargaining unit, rather than individuals, is to receive certification; this certification may be revoked where the Board believes that the union no longer represents a majority; and recognition as a bargaining agent is to be denied to any union which in the opinion of the Board is (a) influenced by an employer so that its fitness to represent employees is impaired or (b) dominated by an employer.⁵

Trade Agreements.—Collective bargains in the main are developed between the union and the individual employer. Toward the end of last century, however, there grew up a more ambitious brand. In view of the widening range of competition among employers engaged in producing the same commodity, it was becoming increasingly difficult in some industries to achieve acceptable gains with any one employer so long as his competitors held out against union standards. To meet this the union sought contact with the employers as a group over the whole area of competition, or some considerable part of this. The bargain resulting, through which conditions were set forth in great detail

⁵*Labour Gazette*, July, 1947, p. 923. This measure, it should be noted, has not yet passed the House.

and applied to all employers concerned, is generally referred to as the trade agreement. Such collective action results in a considerable measure of restriction of competition among employers and has far-reaching effects upon the industry involved. The best known of trade agreements of this type on this continent is that between the bituminous coal companies in the Appalachian mining area in the United States and the United Mine Workers' Union.

Other Benefits of Organization.—Prominent among these is the maintenance of benefits systems. Serving in this capacity unions provide the machinery for mutual aid among the members, or what might be called a narrow form of social insurance. Funds for different purposes are built up and paid out as prescribed. Some thirty-two million dollars were paid out in 1928 in the United States in the form of death, sickness, disability, old age, and unemployment benefits. Activities also are carried on for the promotion of health, and frequently the union office serves as an employment bureau for the trade. Educational, social, and recreational activities are carried on in varying degree. Somewhat different from these are the political activities of the unions. Until 1943 it was the consistent policy of the union movement of Canada and the United States to keep free from political organization and alliance. By the political activities of unions here we mean, therefore, the efforts carried on to influence legislation without developing a distinct party. Resolutions covering various matters of interest that are amenable to improvement through legislation are passed at the conferences of the larger bodies and are carried by accredited representatives to cabinet ministers, members of parliament, and members of city councils at the various seats of government. Through this legislative lobbying and other means of influencing public opinion, unions seek to advance desirable legislation as well as to check the passage of laws unfavourable to the labour interest. While disavowing intentions of forming themselves into a party with candidates of its own, unions have not been backward in favouring particular individuals who may be running for parliament or city council. Records are kept of important public men according to whether they have voted for or sponsored legislation favourable to labour in the past, and recommendations are issued from official headquarters as to whether Mr. So-and-so should be elected or defeated. In 1943, however, one large section of Canadian labour broke with this tradition and brought support directly to Canada's third party—the C.C.F. Some individual unions had shown party attachment earlier.

The Coercive Methods of Unions: The Strike.—In the event of the employer refusing to pay the wages which the union has determined the workers shall have, or otherwise failing to concede labour's minimum demands, the union orders a *strike*. The strike may be defined as a concerted cessation of work by a group of employees, carried on in connection with certain demands upon the employer, the intention being to take up the work again when the demands are granted.⁶ The worker does not look upon the strike as a relinquishing of his rights to the job. He has not laid it down that others may take it up. According to his philosophy, it is still his job. The employer, on the other hand, is not likely to see it thus. To his mind the job is always his to dispose of and when workers leave it they have no claim. Injured economically by the action of the union and angered usually at the disloyalty of his men, he approaches the labour market and brings in other workers to take the place of the regulars. The union's answer to this is the establishment of a *picket*, or, as it is usually expressed, it begins *picketing*. This means it places its representatives at points where they can handily meet the newly hired substitute workmen and impress upon them that the jobs they are taking are their jobs and that they are on strike to enforce certain demands with respect to them.⁷ Implied in the practice of peaceful informative picketing is a reliance upon a class consciousness among workers—a belief that workers will be loyal to each other—that one group will not aid an employer to defeat another group in its considered demands simply for the sake of the payment involved. Picketing, however, has a natural tendency to go further than this. When the newcomers fail to respond to the representations of the picket, the latter attempt to persuade them of the unfairness and the unwisdom of the thing they are doing. If they still continue to work they may resort to threats and intimidation or even to violence. At this point, the employer appeals to the law for protection against the molestation of his working force and the destruction of *his property rights*. How effective a strike will be is largely determined in many cases by the adequacy of its picket, and the latter in turn depends upon what practices the law will permit and what it will pronounce illegal.

⁶Viewed from the consumer's position the strike is in the same class with a decision of management to stop producing.

⁷In the "sit down" strike as introduced in the middle thirties the strikers remain in the plant for the better defence of their jobs against the "strike-breakers."

Strikes are of several varieties, depending upon the purpose and numbers involved. Not all are associated with unions but arise spontaneously from a background of unsatisfactory conditions. Usually, where labour is organized, they are called as suggested above to give force to demands in the collective contract. Sometimes they arise in connection with disputes over points of interpretation; at others again to force an employer to recognize the union or to employ union men exclusively. These, it will be seen, are all directly concerned with the improvement of conditions for the striking group itself. Different from these is the *sympathetic strike* where workers strike against an employer against whom they may have no particular grievance, with the aim of assisting other workers who are already striking and who perchance have not a good expectation of winning their fight single-handed. Reaching beyond this again is the *general strike* where workers, generally, walk out from their employment with the purpose of causing a universal hold-up of production. This activity is associated with a philosophy of economic revolution, the ultimate aim being to overthrow the capitalistic order. Practically the immediate purposes of the general strike may be attained through a walk-out in certain strategic industries, notably the various transportation and power service groups.

The Boycott and Union Label.—Contrasting with the strike but sometimes associated with it in practice is the *boycott*. While the strike aims to force labour's demands upon the employer through depriving him of his working force, the boycott seeks the same purpose through taking away his market. It injures him through the consumer. In its simplest form it is a matter of the workers themselves agreeing not to purchase any goods from the employer until the demands are granted. If the union is a large one and the employer is a producer of commodities that workers consume, such as workers' shirts or overalls, this may be of some effect. Otherwise it amounts to little. Appeal then goes out to the wider market of consumers. Other workers' groups will be canvassed. Middlemen dealing in the commodity may be appealed to, or even threatened with a similar boycott of their goods if they buy from this employer. The consuming public itself may be asked to desist from buying, by means of pickets bearing propagandist placards parading up and down the street, or through the agencies of platform or press. Where the appeal goes out to others beyond the workers immediately involved, the practice is known as the *secondary boycott*. Here, again, the effectiveness of action reaches its limitation through coming

into contact with the law. For access to the market is one of the cherished property rights in our competitive economy, and for the most part where the law has been called in secondary boycotts have been declared illegal.

The *union label* on the other hand is legal. Through it an appeal is made to the consumer to buy only goods that have labour's special stamp upon them. The appeal may be thought of in terms of guarantee of good quality as a result of the honest labour involved. Chiefly it is, however, a sentimental approach to buy for the sake of protecting labour, or more properly, inasmuch as it is directed largely at buyers who are themselves unionists, it is an appeal to organized workers to promote the cause of unionism.

Closed Shop.—A further means through which unions seek to make bargaining effective is the closed shop policy. So long as non-union men are present in a factory or other place of work, along with union men, it is difficult, and sometimes impossible, for the union to uphold its standards. The employer, with his legal right to hire and discharge at will, naturally tends to favour men who make the least expensive demands upon him for a given amount of work. Union demands for better conditions, standard hours, and union wages are almost sure to appear to him as causing a costly labour supply. It is claimed by the unions, on the basis of experience, that the shop must be closed to non-union workers, or they stand to lose out altogether. To the declaration coming from many employers that they are maintaining an *open-shop*, showing no discrimination for or against men simply because they belong to a union, organized labour replies, "there is no such thing existing as a genuine open-shop." In the natural course of events it must be one or the other—union or non-union. During the 1940's the type emerging, apparently with the best survival values, is the so-called "union shop," a form which permits freedom to the employer in hiring workers but requires them to become union men within a stated period (say) thirty, sixty, or ninety, days or be discharged.

Coercive Methods of Employers.—As might be expected, employers have not stood by while labour has been developing its organization and all these weapons of defence and offence. On the contrary, there seems to have been a striking parallel in organization and development of conflict devices on the two sides. The corporate form of business organization is itself the parallel in a sense of the smaller unionism of the earlier day, and in some

instances may have provided the cause for it. But looking beyond this, to the larger union organization of the last half-century employers have opposed their *Employers' Associations*; to the strike they have opposed the *lockout*; to the boycott they have opposed the *blacklist*; to the drive for the closed shop they have made their battle for the open shop; or they have practised the *Yellow Dog Contract*; to cope with picketing and extreme boycotting they have developed a use of the equity courts through *injunctions*; finally, to the whole union hope and practice in collective bargaining they have set up *their* definition and practice of collective bargaining by substituting the "*company union*" for the regular trade union.

"An employers' association is a group which is composed of or fostered by employers, and which seeks to promote employers' interests in labour matters." All such associations are not to be thought of as hostile to labour. Some, such as the Builders' Exchanges of the different cities and the National Stove Founders' Defense Association, are distinctly organizations for developing detailed trade agreements with organized labour in their various fields of industry. In America, however, as contrasted with Europe, the majority of employers' associations have been of the belligerent type, having for their purpose the prevention of the organization of unions, the destruction of existing labour organizations, or restricting the activities of those they are unable to destroy.

The Yellow Dog Contract refers to the practice of many employers of requiring of a worker as a condition of his taking employment that he shall not become a member of a union while he is under contract, or, if now a member, that he will drop his union card at once. It stands, therefore, as the antithesis of the closed shop as we have defined that term. It is now illegal. The open shop, which a great portion of American employers laud as in keeping with the ideals of American freedom, is open to union and non-union men alike. "Why should a man be forced," ask such employers, "to become a member of any organization and submit to the payment of dues as a condition of obtaining work unless he chooses to do so?" (The union interpretation of what the open shop really means we have already seen.) The lockout is the employer's practice, when he is dissatisfied with the conduct of his men in their demands upon him, of shutting them out from employment. Like the strike it does not imply permanency of dissociation but anticipates a return to the employer-employee relationship after such postponement as is necessary to bring the workers

around to an acceptance of his terms. In this it is seen to be different from discharge. The practice of blacklisting is simply the placing on record and circularizing of the names of certain individuals among the workers who may have been discovered or are suspected of fomenting unrest or spreading union doctrines, or otherwise gaining the disfavour of the management. The wide circulation of such lists among employers is greatly facilitated by the machinery of employers' associations. So effective may this device become that an employee who has incurred the disfavour of one employer may find it difficult to obtain work anywhere in the trade. He is a "marked" man.

The company union differs from the regular trade union in various respects. In the first place, it has not originated, except, perhaps, in a few instances, in the voluntary action of the workers themselves. On the contrary the initiative has been taken by the employers, sometimes with the idea of securing closer co-operation with their own employees through having them choose their own representatives and meet with management from time to time according to some prearranged plan; but more frequently it is done for the purpose of forestalling regular union organization in the plant by occupying the ground in advance. In the second place, the basis of organization is entirely different from that of the older unions, being confined to the workers of a particular employer. This fact in itself makes it inadequate to the task of developing and maintaining common standards over a whole trade or industry. Furthermore, its area of choice of bargaining representatives is limited and that in rather a fatal way. Altogether it is an inferior device for bargaining and enforcing progressive conditions. On the other hand, it has much to be said for it as an agency of consultation and co-operation.

The company union movement had a great expansion in the years immediately following World War I in both Canada and the United States, and again in the early thirties when it challenged the right of the trade unions in the United States to speak for labour in the arrangement of codes under the N.R.A.

Types of Unions.—Labour unions may be divided into three classes or types according to their form of organization. First, there is the *craft or trade union* where membership is confined to the particular craft. Such are the carpenters', plumbers', and printers' organizations and the various railway brotherhoods. Secondly, there is the *industrial union* where membership aims to include all

the workers in an industry without reference to craft lines. Such is the organization of miners known as the United Mine Workers. Finally, there is the *general labour union* which is a broad organization of labour having little regard for either craft or industrial lines. Examples of this type are scarce today, the best instance on this continent being the Industrial Workers of the World, a radical organization which operates a spectacular programme of violent strikes among exploited unskilled workers. What form of organization unionism takes has a bearing upon its philosophy and practices. Craft unions are usually somewhat narrow in their interests. They seek the advancement of their own craft members with little concern for the condition of the rank and file of workers. Historically, they have tended toward an aristocracy of the skilled as the coverage for union organization. They have the advantage, however, of being closely knit through their singleness of interest and their programme is usually well defined. They came into prominence in Great Britain as the dominant type of unionism about the middle of last century and constituted the core of the American movement from 1890 to 1935. The industrial type with its greater inclusiveness seems more in keeping with much of modern business organization. It is probably an abler device for forceful bargaining and for striking. It came into both Britain and America toward the close of last century claiming those industries where skill is of less importance, such as mining, brewing, ship-loading, and, later, clothing and textiles. Recently it has expanded into the steel, automobile, and rubber industries, and under John Lewis as leader has challenged the dominance of craft unionism on this continent. The general labour union is characteristically the agency for the expression of idealism and revolution. For the most part, it does not bargain. It aims at the general emancipation of labour through common action. The Knights of Labour, the great organization of the eighties of last century, included progressive employers and farmers and professionals, as well as wage labourers. It emphasized co-operation, educational uplift, and political activity. The One Big Union of Western Canada and the Industrial Workers of the World have looked more directly to violent revolutionary practices.

Primary and Secondary Organization.—The unit of organization is the *local* union. This may include members from one craft or several or all the workers in a plant or plants of a local industry. Throughout America workers who belong to definite crafts have been encouraged to organize into locals with members of their own

craft exclusively. Federal locals, or groups inclusive of many crafts, have been acknowledged, however, by the larger organizing bodies when there are too few workmen in a place to form separate craft unions. The manner of operation of the local is simple and informal. Government is essentially government by mass meeting. "The whole body of members, assembling once each month, once each fortnight, or oftener, is the final authority for the transaction of all business—legislative, executive and judicial." The meetings, which are presided over by the local president, vary in quality according to the personnel of the membership, but are said to be characterized often by considerable rambling and pointless discussion. Officers generally are unpaid except for the *business agent*, who carries on the bargaining with employers, adjusts industrial disputes, and sometimes collects dues.

The local union is the primary unit of labour organization. It is also primary in the sense of being first in time. Local unions had their beginning in Canada a century ago but not until 1860 was there any other type of organization. In the United States, however, secondary organization in the form of *city centrals* came much earlier, dating back to the 1820's in Philadelphia, Boston, and New York. City centrals or *trades and labour councils*, as we more frequently call them, are now a prominent feature of labour organization in all industrial centres. They are delegate bodies consisting of the accredited representatives from the various locals situated in the geographic area, and meet from time to time in conference. They are concerned with all matters that are of interest to the locals generally and give their time to promoting those policies that can best be attended to through common action rather than by effort of the individual local. Especially, they interest themselves in the activities of municipal councils and sponsor and work for projects favourable to labour.

Not less significant has been the linking together of locals belonging to the same craft or industry over a wider geographical expanse. With the development of transportation and trade and the widening out of the area of competition this was to have been expected. Soon after 1850 this movement got under way in the United States and in the late sixties reached over into Canada, tying up the previously independent locals of printers, shoe-makers, engineers, etc., into great chains with central headquarters usually in one of the big cities south of the border. These came to be known as "Internationals" and since then the main body of unionism in

both Canada and the United States has come to be known as the International Labour Movement. These great internationals such as the International Association of Machinists, the United Mine Workers' Union, and the various railway brotherhoods number upwards of a hundred. They are the phase of organization entrusted with standards and their enforcement in the purely industrial features of labour operation. They watch over the whole area of collective bargaining, lay down usually the minimum terms, assist the locals in promoting their case, control the central strike funds, and carry on the organization of new locals. In a sense they are the backbone of business unionism. Among the newer industrial unions a Canadian central office has taken over most of this functioning usually associated with international headquarters. Not all of Canada's unions are of this continent-wide type. A considerable portion, notably in Quebec, are joined up in purely Canadian systems, while a smaller number exist simply as independent locals. An extension of British unionism into Canada made headway for several decades but has now completely died out.

The Congresses.—Greater again than the internationals and a step farther removed from the locals are certain federated bodies. For the craft unions the American Federation of Labor is the supreme delegate body receiving in annual convention the accredited representatives of these internationals, city centrals, unattached locals, and state federations of labour. It has no sovereign rights to set aside or override the actions of its internationals, but like the federal government of the United States is supreme to the degree that powers have been delegated to it. Thus it is the final arbiter in what are called jurisdictional disputes among its internationals both for Canada and the United States. It is their official spokesman too in the latter country in the matter of influencing public opinion. With official headquarters at Washington it carries on effective lobbying for legislation both there and at the various state capitals. In Canada, similarly, for legislative purposes the craft unions' delegate body is the Trades and Labour Congress of Canada. After conventions its chosen delegation waits on the Cabinet of the day to plead labour's desires. It issues charters to trades and labour councils of industrial towns and cities and to some organizations with no international affiliations but otherwise leaves organizing activities and judicial responsibilities to the internationals.

For the industrial unions, the overall delegate bodies are the Congress of Industrial Organizations in the United States and the Canadian Congress of Labour in Canada. Division of functions between the two does not follow the same line as with the two craft federations, the Canadian body taking a more active part in organizing than the Trades and Labor Congress and it also is responsible for settling disputes among member unions in Canada. Furthermore, it has been more colourful politically, endorsing a particular party—the Cooperative Commonwealth Federation—rather than depending solely on legislative lobbying and sending annual delegations to the cabinet to plead labour's case for legislation. The adherents of craft and industrial unionism are of near equal numbers both in Canada and in the United States. In the Province of Quebec, Canada numbers a third congress, French-speaking and Catholic, with a following of 75,000. It is strongly opposed to the international connection as a basis for union organization. The international infiltration of the province is, however, long-standing and powerfully supported and the two movements compete for collective agreements with employers. Each likewise maintains its lobby at the provincial capital and the Catholic Congress makes its own representations at Ottawa.

Economic Effects of Collective Bargaining and Union Policies.—Collective bargaining has increased the real earnings of labour for groups that have been effectively organized and probably also for labour in total enabling wage-earners to maintain their proportion of increased national income in spite of technological change and vast additions to capital. As already indicated, too, it has standardized pay rates in industries or trades over wide areas of competition in products. Unions have reduced the hours of labour doing battle against employer forces first for the ten-hour day, then for the eight-hour day, and, within our own time, the forty-hour week. In some instances unions have practised policies of restricting output, especially in opposing the fullest use of new machines, whose introduction across the years has been the main cause of increase in social income. On the whole they have probably increased the costs of the employer, considered in the short term, which condition has tended to increase prices to the consumer. In the long run, however, they have increased the purchasing power of the worker-consumer; which condition, combined with more leisure, has tended to stabilize production and augment the national income.

Labour Legislation.—While trade unionism represents the forceful action of the workers themselves and looks toward tests of strength between employers and employees, labour legislation is an expression of the will of the public upon labour matters, and looks to peaceful settlement of difficulties and protection of the weak. We must be guarded, however, against viewing the two movements as separate and independent, for, while in an earlier day labour statutes were born mostly of humanitarian motives, and while today they often owe much to progressive employers, purposefully organized groups, and forward-looking citizens, they are, nevertheless, promoted very largely by organized labour, and we find that usually they have attained their highest development where labour is strongly organized. Organized labour, in fact, has come to think of legislation as being supplementary to its economic activity involving areas difficult to cover through bargaining and giving a degree of permanence to achievements that otherwise might be difficult to hold. Thus, the Canada Trades and Labour Congress and American Federation of Labour have contended for generations for immigration laws sufficiently restrictive to enable collective bargaining to function in a market not flooded with alien workmen, and both Canadian congresses have striven for a statute compelling employers to negotiate in good faith with unions certified as representing labour. Today, while the human appeal is still resorted to, labour bills largely originate in the conventions of the unions, and the public is then invited to consider their merits from the standpoint of justice and its concern for the national welfare. The two methods are thus to be viewed, not as separate but interlocking. A force making for uniformity in legislation since World War I has been the activity of the International Labour Organization operating in connection with the League of Nations and later the United Nations. It is an organization representative of employers, employees, and governments, and is based on the assumptions that the maintenance of fair working conditions in the various countries, and somewhat equal labour standards as between the different nations, are causes contributory to peace in the world. Member nations are under obligation to submit to their various parliaments for consideration and possible ratification recommendations that are passed by the conventions of the International Labour Organization. In this way, matters such as, let us say, the eight-hour day are brought under discussion at approximately the same time in the various industrial countries.

Labour legislation has now developed along many lines. Here we may deal with only a few types.⁸

Child Labour Legislation.—Children, from the first days of the factory system, were welcomed into industry as a cheap form of labour. It paid to use them because they were cheap, and comparatively productive. Childhood is the period of most rapid assimilation of skills and the light routine tasks that come with division of labour and machine industry can soon be learned. Anyone who has watched a grown person attempting to develop the muscular co-ordination necessary to perform some feat he has not been brought up to will appreciate this truth of youthful superiority. Sustained attention for long periods at one set of motions is, however, wearing upon the nervous organization of children. Variety, freedom, and spontaneous activity should be their lot combined with periods directly dedicated to orderly achievement.

Whatever may have been true of medieval apprenticeship as a system of training and an environment for the passage of youth, there can be little offered in defence of putting children to work in industry since the coming of the modern era. The whole set-up of industry is opposed to progressiveness in learning. Tasks quickly mastered are repeated over and over. The requirements of the machine allow of no relaxation, no change of scene, no play. Continual application to routine tasks defeats development of imagination and leads to premature oldness. The time that should be given to education passes with sparse results. Even physical development in its finer aspects is likely to be blighted. Generally speaking, a society that practises child labour loses in two directions: viz., first, it will suffer a loss in productivity through this section of its workers failing to develop to their full working capacity, and, secondly, these workers themselves, exploited in youth, will never realize the degree of satisfaction as consumers that they otherwise would. These general principles laid down, however, there is much to be said about what is the proper age to stop school and go to work, and what allowances should be made among different industries and different types of children. Textiles are different from

⁸A phase of state activity we may not consider here is that associated with remedying industrial disputes, covering mediation, compulsory investigation, and arbitration.

For constitutional difficulties in developing labour laws in a federal state, see E. E. Witte on "Labor Legislation," in *Encyclopaedia of the Social Sciences*, ed. by E. R. A. Seligman (New York, 1930 *et seq.*).

agriculture: youths of high calibre are different from those of low calibre.

As for what constitutes adequacy in child labour laws, Professor J. A. Estey declares:

It is commonly held to be desirable:

1. that children under 14 should be normally excluded from industrial occupation;
2. that children of ages 14 to 16 be restricted to the eight-hour day (or less), and be barred from night work and dangerous occupations;
3. that all such restrictions be coupled with compulsory schooling, since to exclude children from factories only to let them run the streets simply substitutes one evil for another.

In addition the law should be enforced by carefully trained and competent inspectors.⁹

Minimum Wage and Maximum Hour Legislation.—Wage and hour legislation has developed along two lines according to whether the ideal has been to protect badly exploited groups or whether it is to assist particular industries in drawing up satisfactory wage schedules. The latter objective is sought in our various provincial Industrial Standards Acts (in Quebec the Collective Agreements Act); the former in our state and provincial minimum wage laws. The Fair Labor Standards Act of the American federal Government passed in 1938, while concerned primarily with minima, embraces both aims. The Dominion Fair Wages Act is secondary legislation requiring only that federal employees be paid not less than the standard wages of the communities in which they may be working.

Legislation for a minimum wage is a development coming from New Zealand and Australia. From thence it soon spread to Great Britain and from there into the United States and Canada. Primarily it was aimed at the *sweating system*, a condition pertaining among the clothing and certain other seasonal industries involving the use of low grade ignorant labour and little machinery. In it contract jobs were taken to be done in the home and the "sweater," playing upon the necessitous condition of women and children, ground them down through piece rates that made life almost intolerable. Owing to these conditions he could buy even more labour hours as wages dropped lower and the market offered no automatic corrective. The minimum wage came as the answer to this result of unequal competition. It did not propose, in the first instance at least, to have a wide application in the general field of wages. Once introduced, however, in the limited situation, it soon spread beyond and came to cover a large number of industries in both Australasia

⁹Estey, *The Labor Problem*, p. 297.

and Great Britain. In these countries it affected both male and female labour. In the form introduced in America, however, it has been limited until the middle thirties, to women and children. Even now the bulk of the orders are directed toward female workers in some of the provinces, or to industries where females are. Ontario, for instance, though its orders as recently amended do cover males, names the same rate for both sexes and the orders apply chiefly to the industries that employ women. Like most such laws minimum wage acts are administered by government-appointed boards which set up schedules of minimum rates that must be paid in the various employments. The economic principle followed in the framing of schedules is that of providing income sufficient to sustain a decent standard of living. This calls for wage distinctions between people living in the largest, the medium-sized, and the small cities and towns. Criticism of minimum wage laws centres on their poor enforcement. In the United States progress has been hampered until recently by constitutional difficulties. Similarly the general coverage Minimum Wage Act of the Dominion Government was found *ultra vires*.

The Fair Labor Standards Act, hailed as the most important labour legislation in the United States in 1938, proposed to have no employee engaged in interstate commerce or producing goods for commerce getting less than 30 cents an hour and contemplated a minimum of 40 cents as rapidly as is deemed economically feasible by the administrators of the Act. Likewise it named a declining maximum work-week beginning with forty-four hours and dropping to forty hours after three years. The Act provided for the creation within the Department of Labor of a Wage and Hour Division under the direction of an *Administrator* appointed by the President, who in turn shall appoint a committee for each industry, composed of equal representatives of employers, employees, and public. These committees study their respective industries and recommend to the Administrator the highest minimum wage rates compatible with the economic and competitive conditions of the industry, and also differentiated minima for the various classifications in the industry. The Act affects directly twelve million workers. It is wage and hour legislation developed from within each industry but with representatives of the public playing their part, and with the result scrutinized and endorsed or sent back for improvement by the general Administrator.

Under industrial standards acts in Canada the services of government officials are available in most provinces, upon petition of representatives of employers *or* employees in a trade or industry, to convene conferences of the two parties in any area to investigate the conditions of labour and to negotiate standard rates of wages and hours. If those in attendance are deemed representative and the parties succeed in formulating schedules satisfactory to them and to the Minister of Labour, the latter may approve the terms and have them made applicable to, and binding upon, every employer in the industry in the whole province or any designated part for a space of not more than a year. Maximum hours and minimum wages are named among other requirements and beyond these (usually) differentials are provided among different classes of workers. They are thus more than mere minimum and maximum laws. Distinction in wage rates is also made between different zones or cities. Collective labour agreements thus endorsed and made authoritative are widespread and significant in Quebec. In the other provinces, notably in Ontario, they have made headway but are less general.

The Economics of Wage Improvement through Collective Bargaining and Legislation.—It is time to face the question, "How can wages be improved by forceful union demands and by action of legislatures?" Wages, we have seen, are determined by conditions of demand and supply. If they are low, supply must be strong in relation to demand. Any improvement it would seem must come either through strengthening demand or controlling supply. But supply in the long run we have shown is a matter chiefly of numbers in the working population, though it is affected by length of the working day, conditions of speed, etc. And demand, on the other hand, is a derived demand being based upon the demand for goods. These are difficult matters to change through conscious control. Moreover, our analysis has shown that each employer tends to hire men until the importance to the firm of the last one taken on is just equal to the marginal cost. How, then, can employers be forced to pay more than they do and employ as many as they employ at present? If they pay more they will surely hire less, and that for two reasons: (1) they will have to charge more for their product and hence will sell less; (2) they will use more labour-saving machinery and correspondingly less workers. What then will become of those left out? Will they not enter into competition, offering their services at lower rates in order to acquire the means of living? In

keeping with the thought suggested by this reasoning, the economists of the older school concluded that nothing could be done through legislative action or through organization of workers to improve general wages. They admitted the possibility of raising the wages of particular groups, but held that unless something could be done to effect a reduction in the total number of workers, any increase coming to particular groups would result in less being employed in that calling, leaving a residue to swell the numbers seeking employment elsewhere with its consequent deleterious effect upon wages in these areas.

This emphasizes the momentary aspect of the market and takes too static a view of both supply and demand. It contemplates a condition where the amount of work to be done, the amount of product a worker will turn out, the price of the product, and the amount of the fund available for the payment of labour are constant or are moving together in an inevitable relationship upon which mere association, or artificial pronouncement of a legislature can have no effect. It fails to appreciate the possibilities of expanding productivity and also the changeable nature of labour supply. One of the chief implications of both collective bargaining and minimum wage legislation is that this whole idea that a man is an unchanging cipher in the productive process is completely erroneous. If through unrestrained workers' competition employers are allowed to follow down this ladder of descending importance of additional workers until they reach a marginal productivity at \$2 per day, this low wage will bring with it under-nourishment, slavishness, and low output. This furthermore will affect future as well as present workers. If, on the contrary, something is done to prevent this low wage competition—if labour takes a stand collectively (say) that it will not work for less than \$3 a day—although employers will in the first instance hire less men, in a short time the superior energy and vitality they display owing to the better food and home conditioning will increase the worth of all and stimulate employers to hire more. More energetic labour will counteract at least the first tendencies to substitute machines. Of itself, however, increased personal efficiency is not likely to bring back into employment for some time all those who have been dropped because of the shifting of the margin.

A second error in the reasoning of the pessimists lies in the assumption that management is a static factor. It has been observed by minimum wage administrators that employers in the same industry are found paying very different wage rates, some staying

in the competition on the basis of low wages while others doing quite as well succeed through superior management. The passage of a compulsory wage law forces the former to change their methods and it is not necessarily true that the wage increase forced upon them results in any increase in price of the product or less workers on the force.

A third mistake lies in failing to see the relationship between increased wages and changed demand for labour resulting from the increased demand for consumers' and capital goods. Distribution, we have argued elsewhere, has an important bearing on the relation between income, savings, and total outlay. Large portions carried to interest, rent, and profits tend to slow down the circulation process through stimulating saving, whereas high wages increase consumption and investment, and demand for labour has its origins in both these latter. Workers may well argue, therefore, that total wages should absorb a good share of increasing productivity and that all sections of labour should participate in the increase. Economic theory supports the view that the free capitalist economy cannot function effectively without their doing so.

A fourth point of error is the failure to recognize that higher wages achieved through legislation or collective bargaining have a bearing on the amount of labour supply. Experience has shown that in the long run working families rising in the economic scale rise also socially, and taking on new standards of living tend to control numbers in keeping with the new requirements. Organized labour, as a matter of fact, is very conscious of the constant threat of excess numbers. Its technique in limiting apprentices illustrates this in relation to particular trades; its consistent opposition to free immigration expresses the same on the general front; it is to be expected that consciousness of the problem must have its effect on controls within the family.

Forceful bargaining and legislation, therefore, may achieve increased wages on the *whole labour front* in four ways, viz. through controlled labour supply, increased productivity of industry, increased demand for labour and forcing a larger proportion of total product from the other factors. The last named has doubtless been overstressed in the thought of working people who often have exaggerated ideas about the unmeasurable wealth of "the capitalists." Statisticians have made investigations which have led economists to conclude that there are rather definite limits to the amount that can be taken thus by labour and still expect savings

to take place in sufficient quantity and entrepreneurship to be forthcoming in a satisfactory manner.¹⁰ Perhaps 75 per cent of national income is about the upper limit in a capitalist economy like the United States. Within this 75 per cent there is possibility of general improvement of the wages of lowlier workers through capturing part of the high salaries that go to others more advantageously placed. In the long run, however, more hope of large improvement rests in the possibilities of increased productivity, increased demand for labour and control over numbers.

It is to be observed that a "bargaining theory of wages" is, therefore, not completely at odds with earlier theory as presented in this book.

Limitations on Wage Increase.—While endorsing the method of increasing the wages of labour by collective or legislative action, we hasten to add that demands for increase may be set too high. The reasons for this are, first, that abnormally high wages will limit or kill particular industries, and secondly they will throw the economy out of balance and thus stall progress. Viewing the matter from the angle of a single nation, the limits may be rather definitely drawn for some industries by the competition of other nations in the world market. This seems to be peculiarly true of Canada. With the average productivity per worker lower in most manufacturing lines than that of similar workers in the United States, it is evident that the Canadian employer is at a disadvantage in equalling the American employer's wages. Partly this has been compensated for by tariff and subsidy favours but the handicap is hard to overcome. Actually Canadian wages tend to fall short of American wages in the same industry in approximate relation to their lesser value productivity per man. Canadian organized labour, in view of this, would be well advised to work for reduction of living costs rather than to place too much emphasis on wage increases.¹¹

Wartime Wage Control.—The Canadian economy in 1940 when the country had been at war for only a year presented a situation such that those responsible for war production concluded that some limit must be set on wage increases. Owing to enlistment of the able-bodied into the armed forces, the normal labour supply was being rapidly reduced and shortage of workers was becoming

¹⁰See, for instance, W. I. King, *The Wealth and Income of the People of the United States* (New York, 1923), pp. 165-7.

¹¹See H. A. Logan, "Labour Organization: A Critical Review" (*Canadian Journal of Economics and Political Science*, vol. IV, May, 1938).

noticeable in some lines to such a degree as to give rise to the term "bottle-necks." With wages rising unpredictably in view of general and particular labour scarcities, production firms were loath to commit themselves to contracts for future deliveries at a time when the build-up to all-out production was the nation's first ambition. Secondly, the transfer of a great part of production capacity to the purpose of war goods at the same time as there was a phenomenal increase in purchasing power in the hands of the people created the potential for an unhealthy condition of inflation.

As a chief means to stimulate the halting production due to fears of increased labour costs and as a contribution toward checking inflation, the government of the day issued wage Order-in-Council P.C. 7440 pegging wages of all war industry firms at the highest point they had reached in the previous decade and a half while providing for a flat bonus running with the cost of living. Some compromise with this mechanical pegging of total real wages was allowed in individual cases where it could be demonstrated that a firm's rates had been and were abnormally low but the matter had to be adjusted through tripartite boards applied for and set up to study each case. A year later the order was generalized to cover industry generally and *standing* boards were appointed representative of employers, employees, and the public and created at both national and provincial levels. Thus was set up the Dominion machinery of wage control which in the war operated, in conjunction with price control and various fiscal measures calculated to draw off part of the people's purchasing power, to head off the threatening trend toward run-away wages and inflation. At the close of 1943, with the cost of living apparently stabilized, the bonus arrangement was dropped, existing bonuses being incorporated in the regular wage rates. The limitation on increases was, however, retained and, if anything, strengthened by a new order (P.C. 9384) issued at that time. Only in May, 1947 was the ban lifted and wages set free from this overhead control. Though many adjustments upward did take place in the six and a half years of formal control the total effect of naming a ceiling, and of ironing out gross injustices was doubtless very great. The impact upon the economy outclassed by far anything ever experienced in this country by public efforts to hold up wages at the other extreme through minimum wage laws.

Beginning in 1942 transfer of workers to points required by changing industry, in view of the partial lapse in the functioning of

the free wage system, was assisted by broadened and positive powers given to the National Employment Service which during most of the period operated under the more aggressive title "National Selective Service."

The Employers' Approach to Industrial Peace.—Among employers' offerings toward industrial peace is the *Shop Committee*, or, to name the same institution with a different emphasis, the company union. Through this device the employer has sought to come into closer relations with his men, to hold out to them an opportunity for a voice in the determination of their own conditions of work, and in some cases to provide some opportunity for expressing themselves in the larger direction of industry. Much has been said in this connection of the merits of "industrial democracy," an expression carrying considerable emotional and some intellectual meaning through association with the political parallel. Analogies in the realm of social thinking, however, are rarely found to bear close examination, and this appears to be no exception. In the majority of cases, so far as vital matters are concerned, these schemes have not turned over any real authority to the workers. They have been indulgent and paternalistic but not truly democratic. Somewhat more favourable is the judgment of scholars upon the *union-management co-operative movement*, already referred to, which made a promising start in the late twenties. This, to be sure, was not entirely an employers' device, but has been accepted and promoted by several progressive employers in large industries.

Claiming less in the way of democracy than these, but representing considerable gains for labour have been the *personnel departments* introduced into many firms, the central figure in which is the personnel manager. Through this social machinery an important executive office is created, concerned entirely with the human aspects of industry. Though paid by the firm and responsible to it for long-time production results, the personnel manager is expected to give his attention to the workers, to be concerned for their comfort and convenience, to hire them with an eye to their suitability for the job and consequently of the job for them, to promote them as they deserve and train them for future promotion, to look after their physical health and their mental happiness, etc. The movement is motivated mostly by the property interest of the employer in his workers, but marks an advance in general working conditions for those workers affected.

Another movement inaugurated by employers has been that of

profit sharing. Ostensibly this has been put forward with the purpose of raising the condition of the worker through freeing him from complete dependence upon his regular wage by making him a sharer in the profits of the industry. Employers have admitted in doing this that the firms hoped to gain all of what they paid out in this way through the greater productivity expected of the workers, on account of their new personal interest in the business. In their own minds they have often seen such sharing, moreover, as an agency for keeping down strikes in their plants—a device for industrial peace. Employees are not likely to stop work when in doing so they are destroying their own hopes of profits.

Profit sharing involves agreement in advance concerning what portion of the net profit of the business shall go to the workers in this way. In this respect it is to be distinguished from bonuses. Payment may be made in cash or it may take the form of shares of the company, presented outright, or perhaps sold to the employee for cash at a price below the market rate.

The verdict of the economist upon a half-century's experience with profit sharing schemes is unfavourable, in so far, at least, as it affects manual labour. The cash payments have, in the majority of cases, not been significant. Payments through shares in the company have resulted in placing the worker's investments in the same keeping as his wages. If the company gets into financial difficulties, his savings perish at the same moment as his current income. As a method of securing industrial peace, it is generally to be condemned since it tends to divide the worker against himself, causing him to accept bad working conditions in order to sustain his profits. For this reason, it is generally opposed by trade unionists who view it as an agency to destroy labour mobility and to defeat their own purpose. Industrial peace is indeed desirable but it may be bought at too dear a price.

Radical Unionism and Socialism.—Radical unions are for the most part *socialist* or *syndicalist*. Those of the latter type look forward to a condition of society where production is operated by industrial unions, and capitalist ownership and management are no more. Responsibility for gauging and interpreting consumers' desires lies chiefly with trades and labour councils of cities and districts. The new order is to be ushered in by use of the general strike and sabotage of present industry. This type of radicalism had its origin in France and in less constructive form appears to have dominated the counsels of the Industrial Workers of the World

and had some place in the plans of the One Big Union in Western Canada in its ambitious stage at the close of World War I.

Representatives of radical socialism or communism are found today scattered through organized as well as unorganized labour. Vocal communist minorities are present in both major congresses, and communists have dominated certain unions like those of the woodworkers, seamen, and electrical apparatus workers for some years and have constituted strong minorities among machinists and textile workers. They are militant and forceful but practise bargaining with capitalist employers as a present technique. Beginning in 1941 their policy was one of all-out production for the winning of the war and while following this programme they increased greatly in strength. In the early thirties many communists were organized more formally in a federation of their own creation known as the Workers' Unity League but it ceased operation in 1935 in accordance with a turn in world plans of the Communist party. All communist inspired unions work in close association with their political counterpart called in Canada the Labour Progressive party. In the Canadian Congress of Labour, the communists have battled hard at the annual meetings with the dominant group, the moderate socialists, for control of the organization, but at the 1947 convention they were beaten thoroughly and their tactics denounced.

CHAPTER XXXI

PUBLIC FINANCE

EXPENDITURES

THE Scope of Public Finance.—Public finance has to do with the revenues of government, their administration and their expenditure. Decisions regarding the amount of revenues and the sources from which they shall be drawn, together with the choice of expenditures, are matters of great public concern. Evidence of this is found in the popular interest shown when our finance ministers bring in their estimates for the annual budgeting. Governments go beyond the practices of private financial institutions in that they actually make the choices among goods and services on behalf of the people and thus determine in some measure the direction of consumption. They spend our money for us, or, to put it more truthfully, we gratify some of our desires collectively through government expenditures rather than privately by spending it individually for ourselves. They also undertake productive enterprises directly. As we have already learned, there is no exact dividing line between what wants shall be gratified individually and which ones collectively. It is a matter that varies from country to country and from time to time. The point we need to realize is that public finance is an integral part of our general economy, the aim and purpose of all of which are the answering of economic wants, and the financial activities of governments are to be judged like all other parts of our economic system by asking how well they succeed in carrying out that purpose with a given amount of resources.

Corresponding to the financial practices of government there have been growing at the hands of economists over a long period of years a body of principles which are an important part of the science of economics. In fact, public finance as a body of theory is one of the oldest divisions of economics. Scholars very early began to make their observations upon the fiscal experiences of princes and statesmen and to write them down for the guidance of these rulers or their successors. It has long been demonstrated that there exists a close relationship between the way taxes are laid and revenues

spent on the one hand, and the prosperity and welfare of the people on the other. Today it is being appreciated likewise that there are right ways and wrong ways of handling public debts and that the servicing of these may have calamitous effects upon the condition of private industry. Public finance, in fact, builds into economics in most phases of the latter. When public funds are used in assisting industry or in carrying through economic enterprise directly, it ties in with production. When public revenues are used to lay out a park, or to provide hospitals or health service, government is thereby changing the direction of consumption. When finance ministers distribute the burden of taxation, taking large amounts from certain groups of the population and less from others, and then expend the whole amount in the general interest or perhaps on some particular needy group like the unemployed, they are effecting distribution. Public finance being a part of the larger field of economics demonstrates many of the same principles that we have been studying in earlier chapters. The lack of general economic education on the part of the directors of government finance, as well as of those who elect them to office, is a potent cause of some of our worst economic ills.

Differences between Public and Private Expenditures.—While public and private expenditures ultimately arrive at the same general result, viz. the satisfaction of wants, they nevertheless present fundamental differences. Foremost among these is the difference in motivation. Private expenditures in so far as they are directed toward consumers' goods are dedicated to the increase of individual or family enjoyment. When turned to capital uses the object is private profit. Public expenditures, on the other hand, are not made to bring in a profit to the enterprise but rather to give service to the public, and when used for consumers' goods they seek to promote the general welfare rather than to give increased satisfaction to the persons directing their use. Private expenditures anticipate a more or less exact equating in individual terms between price paid and some specific benefit received. A man pays thirty-five cents for which he enjoys a motion picture for a period of two hours. With public expenditures it is frequently impossible to point to any direct and special connection between taxes paid and individual enjoyments. A portion of one's taxes goes to feed the unemployed, another portion to build technical schools or maintain forces of militia, which, possibly, one does not believe in. It is assumed to be true that everybody in his capacity of citizen benefits

from public expenditures. Nevertheless, it is also true that individually one may be losing far more in a business way even while gaining something as a citizen. A man may be paying taxes to keep up the machinery and personnel necessary to the operation of a Combines Investigation Act even while it is investigating and calling to account the practices of his own firm.

Public expenditures, it may be stated briefly, have to do with the protection and development of a whole people and of the resources upon which they subsist. The point of view of the state, furthermore, tends to the long-time outlook rather than the immediate or the temporary, though it must be admitted that immediacy looms large in the eye of the party politician.

Importance of Public Finance: The Size and Nature of Government Expenditures.—The practical importance of education in public finance depends upon the measure of democracy enjoyed by the people of a country and the proportion of the national income that is spent by the government. Sound public financing is no longer the exclusive concern of any individual or group, but a responsibility of the people. Statistics are not lacking to show how different nations and municipalities have been and are being financed, and well-considered principles have been laid down for the guidance of citizen and statesman. Any study of the records soon brings home the great and growing importance of public expenditures in any of the modern industrial nations.

In the United States public expenditures have risen steadily since the establishment of the national government. The per capita cost of the federal government rose from \$1.00 in 1791 to \$70 before the outbreak of World War II. In 1945 the federal government's outlays exceeded half the national income of the United States. A rise in expenditures over time was not confined to the central governments. Between 1903 and 1928, the outlays of state governments increased almost 1,000 per cent. Until the outbreak of World War II the cost of municipal government roughly paralleled that of the national government. But in recent years the rise of state and municipal expenditures has not been as spectacular as in the case of the federal government. The experience of the United States, of course, was not unique with respect to government costs. A similar trend has been evident in all advanced countries.

Public expenditures in Canada, as in all Western nations, when considered over a period of time, are found to be on the increase. This fact is illustrated in Table xxxiii.

TABLE XXXIII

COMPARATIVE DOMINION, PROVINCIAL, AND MUNICIPAL EXPENDITURES*
AND
TOTAL GOVERNMENT EXPENDITURE
AS A
PERCENTAGE OF NATIONAL INCOME†

Year	Total	Dominion‡	Provincial and Municipal			Total Expenditure as % of National Income
			Total	Provincial	Municipal	
		Expenditures				
	\$'000	\$'000	\$'000	\$'000	\$'000	%
1933	910,221	389,587	520,634	218,864	301,770	28.9
1937	1,100,576	444,599	655,977	359,689	296,288	26.6
1939	1,230,661	571,198	659,463	354,883	304,580	22.6
1941	2,322,564	1,718,787	603,777	311,260	292,517	27.9
1942	4,691,206	4,102,441	588,765	293,637	295,128	44.6
1943	5,509,051	4,907,475	601,576	300,997	300,579	49.5
1944	6,041,055	5,322,718	718,337	413,557	304,800	51.3
		Percentage Distribution				
1933	100.0	42.8	57.2	24.1	33.1	
1937	100.0	40.4	59.6	32.7	26.9	
1939	100.0	46.4	53.6	28.8	24.8	
1941	100.0	74.0	26.0	13.4	12.6	
1942	100.0	87.4	12.6	6.3	6.3	
1943	100.0	89.1	10.9	5.5	5.4	
1944	100.0	88.1	11.9	6.8	5.1	

Sources: *Dominion Bureau of Statistics, *Canada Year Book*, 1947, p. 225.

†Percentages were calculated from data in Canada, 1947; Gilbert Jackson, *Exports and National Income of Canada*, and Dominion Bureau of Statistics, *National Accounts, Income and Expenditure, 1938-1945*.

‡Includes war expenditures.

From the data in the above table, it is evident that government expenditures have expanded enormously in recent years. True this increase was largely the result of financing World War II, but the trend was evident before 1939. It has been calculated that expenditures of all governments in Canada amounted to 'only

13 per cent of national income in 1928.¹ This is in sharp contrast to 51.3 per cent in 1944.

As Table xxxiii indicates, the rise in expenditures was not confined to the Dominion government. The total amount spent by provincial governments increased by approximately \$200 million between 1933 and 1944. The expenditures of municipal governments in this period, however, showed only a slight variation. It is interesting to observe, also, that whereas in 1933 the sum spent by the Dominion government was less than the combined outlays of provincial and municipal governments, in 1944 the Dominion government spent over \$4.6 billion more than the other govern-

TABLE XXXIV
TOTAL AND PER CAPITA EXPENDITURE
OF THE
CANADIAN FEDERAL AND PROVINCIAL GOVERNMENTS
SELECTED YEARS 1868-1946

Year	Federal Expenditure		Provincial Expenditure (Gross Ordinary)	
	Total	Per Capita	Total	Per Capita
	\$'000,000	\$	\$'000,000	\$
1868	14.1	4.01	3.6	1.06
1871	19.3	5.23	4.9	1.33
1881	33.8	7.82	8.1	1.90
1891	40.8	8.44	11.6	2.44
1901	58.0	10.80	14.1	2.68
1911	122.9	17.05	38.1	5.29
1921	528.3	60.12	102.6	11.68
1931	441.6	42.56	190.8	18.41
1933	532.4	50.07	200.5	18.83
1936	532.6	48.64	248.1	22.64
1938	534.4	47.92	273.9	24.74
1940	680.8	59.82	305.8	26.86
1941	1,249.6	108.59	349.8	31.20
1942	1,882.0	161.75	354.2	30.45
1943	4,387.1	371.41	378.8	32.07
1944	5,322.7	462.58	413.5	35.95
1945	5,245.6	432.84	451.1†	....
1946	5,136.2	418.26	....	....

*Sources: Dominion Bureau of Statistics, *Canada Year Book* (various issues).

†Subject to revision.

¹W. L. White, in *Financial Post*, Feb. 15, 1936.

ments combined. Or, on a percentage basis, in 1933 the Dominion authority was responsible for only 42.8 per cent of all governmental expenditures, in 1944 it accounted for 88.1 per cent. As costs pertaining to the recent war diminish, the absolute amount and percentage of expenditures attributable to the federal government will decline.

Growth of Public Expenditures.—The growth of public expenditures in Canada since Confederation is set forth in Table xxxiv, both as regards total and per capita outlays of the federal and provincial governments.

These figures show the general upward trend of the amount spent by our national government on behalf of each citizen. They are eloquent of the startling increases resulting from war; i.e. the rise between 1911 and 1921, and again between 1938 and 1945. It should be noted also that after each armed conflict expenditures failed to return to their pre-war level. While there is a current tendency for federal outlays to decline, on the basis of past experience we can not hope that they will return to the 1938 figure.

Provincial expenditures although not directly concerned with war financing exhibit a similar upward tendency. In fact during the seventeen-year period immediately preceding World War II, provincial spending increased more rapidly than that of the central government. From 1921 to 1938, provincial costs rose by \$71.3 million, whereas federal outlays increased by only \$6.1 million. Despite the fact that Table xxxvi shows relatively stable municipal expenditures between 1933 and 1944, over a longer period, these too have grown. This resulted from the increased services demanded from municipal bodies. As indicated by Table xxxvi municipal expenditures have risen considerably since 1944.

Why Government Expenditures are Increasing.—Why are public expenditures increasing? Is it desirable that they should? How much should governments spend anyway? These are questions that challenge the mind of the student of civics today. We shall attempt to answer the first question along general lines and then proceed to examine the chief items of expenditure of our various governments with a view to finding a solution to the other problems suggested.

Broadly speaking and apart from costs of war, government expenditures have increased in democratic countries because the people *want* the government to do more for them. As wealth and income expand they are in a position to command more govern-

mental services just as they can purchase a greater quantity of consumer goods in the regular market. If people want bigger and better schools, libraries, parks, roads, and similar facilities and are willing to pay for them, public expenditures will expand.

Technological progress (e.g. improvements in communication, transportation, agriculture, and industry) which has made people more interdependent resulted in augmented costs of government. The days of family self-sufficiency, such as once prevailed in rural areas, have practically disappeared in present-day industrial society. The modern urbanization movement inevitably involves higher government expenditures. We require fire and police protection where formerly these were less needed. Health becomes a matter of public concern with increasing density of population, as also does recreation. Consumers require protection against monopolies and against adulterated goods.

Another reason for the rise in public expenditures is the growing humanitarianism of modern times. The laissez-faire philosophy of a century ago no longer obtains. Now we do not regard with indifference the plight of the unfortunate, but take steps to alleviate their burdens. Hence elaborate schemes for relief and other forms of social service have been instituted. Means have been developed for protecting the labourer against exploitation and assuring him of a basic standard of living. This, even if inadequate from the worker's viewpoint, is far superior to the condition which existed when the government only afforded protection against violence with respect to persons and property.

It has been pointed out that one cause for the expansion of public outlays is the growth of democracy itself. So long as property owners only had the right to vote, they watched governmental spending very carefully because they were also taxpayers. With the extension of the franchise many voters are willing to endorse large public expenditures because, in their opinion, somebody else is footing the bill. Doubtless there is something to be said for this contention. In municipal affairs non-property holders seem to have less concern for rising government costs than the real estate owner who, in the short run at least, bears the chief burden of increased public expenditure.

The most recent cause of increased public spending is the responsibility which federal governments in advanced countries have assumed for the maintenance of full employment. This was mentioned in Chapter XXVII and will be discussed again in the

following chapter under the heading "Fiscal Policy." Suffice it to say here that a programme of public works and other projects designed to prevent a decline in purchasing power when a business recession threatens, points in the direction of augmented public spending over a period of time.

The outstanding cause of increased public expenditures in recent times is war. The mechanization of warfare has enhanced the cost of international armed conflict. So long as armaments were technically simple in construction, the money expenses incident to hostilities were relatively small. But the complicated nature of modern weapons has resulted in a vast increase in their production costs, not to mention the expenditures necessary to keep them supplied with ammunition. Furthermore the advent of "total war" requires the mobilization of a nation's entire resources for the purpose of achieving victory. This necessitates government spending on a scale undreamed of half a century ago. Besides, expenditures incident to war do not cease with the cessation of hostilities. Pensions and other payments to veterans plus interest on public debt and the maintenance of a peace-time military establishment now constitute a large item in the budgets of *advanced* nations. This is clearly illustrated in Table xxxv which sets forth the total cash requirements of the Canadian federal government for selected years.

One of the striking characteristics of this table is the huge increase in cash requirements of the Dominion government since the opening of the present century. In the peak fiscal year 1943-4, federal government expenditures were over 100 times greater than those of 1900. In the transition year 1946-7 they were approximately sixty-nine times larger. The data in Table xxxv show the startling expansion of government spending for war purposes in modern times. It is true that the direct costs of war have fallen sharply since 1945, though the armed services still accounted for approximately \$500 million in 1946-7 as contrasted with \$2 million in 1900. But, while direct war costs are decreasing, the deferred expenses, such as pensions, are expanding toward the levels which they will occupy more or less permanently in post-war budgets.

Of the war costs which enter permanently into the peace-time budget, debt charges are the most significant. They constitute a legacy of the enormous war-time financial requirements. In the fiscal year 1946-7, such charges were approximately \$400 million, three and a half times as large as in 1938-9 and over thirty

TABLE XXXV
DOMINION GOVERNMENT TOTAL CASH REQUIREMENTS*
(Millions of dollars)

	1900	1913	1938-39	1943-44	1944-45	Prelim. 1945-46	Est. 1946-47
<i>War, Reconstruction and Veterans' Expenditures.....</i>			90.0	3716.0	3614.9	2682.6	1611.6
The Armed Services.....	2.0	9.0	34.4	2629.1	2938.4	1706.9	488.6
Dept. of Veterans' Affairs.....			56.5	72.1	113.8	401.2	621.5
Dept. of Munitions and Supply				677.8	187.8	263.4	184.2
Agric. and Price Stabilization....				166.3	215.1	195.7	198.7
Other.....				170.7	159.8	115.4	118.6
<i>Direct Mutual Aid Expenditures....</i>				912.6	853.5	948.7	
<i>Other Expenditures..</i>			408.5	524.1	569.9	883.2	1016.9
Net Debt Charges	13.0	14.0	118.5	213.7	279.0	360.3	400.5
Collection of Revenues.....	2.0	6.0	11.9	17.7	20.1	22.6	24.7
Subsidies and Compensation to Provinces....	4.0	13.0	21.3	109.8	107.7	112.5	99.0
Old Age Pensions			29.0	30.4	32.2	33.7	34.5
Family Allowances.....						172.6	250.0
Unemployment Insurance.....				17.5	17.8	18.7	20.4
Public Works....	2.0	14.0	15.5	12.3	13.2	16.3	36.0
Other Ordinary Expenditures...	2.0	9.0	76.1	84.4	89.1	123.6	134.6
Wheat Board Deficits.....			25.0	-3.0	-0.4		
Relief and Spec. Agr. Expend.†..			46.9	37.5	7.4	17.4	6.1
C.N.R. Deficit..			54.3				
Other Special and Capital.....	27.7	79.5	10.0	3.8	3.8	5.5	11.1
<i>Loans, Advances, Etc.</i>			12.4	480.8	562.2	739.3	1000.0
War and Reconstr. Advances...				69.3	-81.3	-2.8	
Financing of Allies.....			-11.3	280.0	405.8	857.8	1000.0
Other Loans and Investments....			23.7	131.5	237.7	-115.7	
<i>Total Cash Requirements.....</i>	52.7	144.5	511.8	5633.5	5600.5	5253.8	3628.5

*Sources: Dominion Bureau of Statistics, *Canada Year Book* and Bank of Nova Scotia, *Monthly Review*, Sept., 1946.

†In 1938-9 represents unemployment and drought relief; in 1943-4 chiefly wheat acreage reduction payments; and in 1945-6 chiefly prairie farm emergency payments.

times greater than in 1900. Debt charges account for over one third of the total outlays apart from those for demobilization and reconstruction. Payments incident to public debts and veterans' pensions will loom large for years to come in the federal budget.

Other items of considerable significance are the subsidies and other payments to the provincial governments. These have increased twenty-five fold since the beginning of the century. They are likely to continue at a high figure under the present financial relations between the federal and provincial governments.

The expansion of our government's activities with respect to the social and economic welfare of the people is reflected in such items as old age pensions, family allowances, and unemployment insurance. The rise in social security payments will partially offset the decline in war-time spending. Unemployment insurance and expenditures on public works also show a tendency to rise in the post-war period. Undoubtedly they will exhibit a sharp increase in the future if a business recession threatens the Canadian economy. This would be in conformity with the maintenance of full employment policy. It should be observed that a sharp reduction in government outlays unaccompanied by a corresponding increase in private spending will in itself tend to cause a decline in economic activity.

The expenditures of our provincial and municipal governments for selected years are shown in the table on the next page. The figures tell the story of the monetary outlays of these governments from the beginning of the great depression to the second year after World War II. The data reflect the general tendency to an increase in expenditures resulting from our ever more extensive governmental activity. The rise in relief payments by municipalities during the depression is noteworthy; from \$9.9 million in 1930 to \$59.6 million in 1933. This item actually increased to a high of \$76 million in 1937, but fell to \$4.2 million in 1944. At present (1948) it is a negligible outlay. The growth in the cost of education (about 25 per cent of total provincial and municipal expenditures in 1947) is indicative of public support for this endeavour. But in a measure, the growing figure also reflects rising prices.

The desirability of an expansion in government expenditures is not an easy problem to solve. In war-time there is, of course, only one answer; government spending must increase if the nation is to survive. As we have seen, certain war costs persist in peace-

TABLE XXXVI

CURRENT EXPENDITURES OF CANADIAN PROVINCIAL AND MUNICIPAL GOVERNMENTS*
(Millions of dollars)

PROVINCIAL EXPENDITURES						MUNICIPAL EXPENDITURES					
	1930	1933	1939	1944	1946		1930	1933	1939	1944	1946
Education.....	33.8	27.5	37.7	65.4	83.2	Education.....	102.7	85.3	100.5	137.7	104.4
Public welfare (Ex. relief)	4.6	3.3	10.3	17.2	19.2	Public welfare, general.	25.1	25.2	29.0	33.6	47.2
Old Age Pensions.....	17.9	18.1	28.1	34.7	47.7	Relief.....	9.9	59.6	51.7	4.2	
Health and hospital care.....	7.4	6.2	14.4	18.8	23.3	Transportation (highways, streets, bridges, waterways, railways, airways).....		43.0	25.9	32.7	44.9
Other.....						Other (protection, general administration and sundry, ex. debt service).....	73.0	78.5	82.6	91.7	110.4
Total public welfare (Ex. relief).....	29.9	27.6	52.8	70.7	90.2	Net debt service (Ex. debt repayment)....	55.7	59.6	51.9	37.4	69.4
Highways and other aids to transport.....	33.4	17.4	28.3	44.3	63.1						
Public domain.....	14.4	8.7	15.0	19.9	27.3						
Agriculture.....	7.1	7.0	7.3	14.8	15.9						
Administration of justice	12.8	11.2	14.7	16.3	19.0						
General government.....	11.8	10.0	15.6	17.9	24.4						
Legislation.....	3.2	2.3	2.3	3.2	2.4						
Gross debt service (Ex. debt repayment).....	51.9	73.7	82.1	79.5	75.2						
Less interest revenue received.....	22.9	23.3	22.6	23.1	23.1						
Net debt service.....	29.0	50.4	59.5	56.4	52.1						
Subsidies to municipalities for general purposes.....	1.1	.1	4.5	3.3	3.4						
Other.....	3.7	1.2	4.9	3.0	4.2						
Sub-total (Ex. relief) .	180.2	163.4	242.6	315.2	385.2						
Relief.....	5.0	36.1	42.8	3.3	4.5						
Total current expenditure (Ex. debt repayment) .	185.2	199.5	285.4	318.5	389.7		309.4	334.1	348.4	349.5	382.2

*Source: Bank of Canada, *Statistical Summary Supplement*, 1946, and *Statistical Summary*, Aug.-Sept., Oct.-Nov., 1947.

time budgets. With respect to growing public expenditures in peace-time, no simple answer can be given. In general it may be said that the government should undertake any activity whatsoever if it can perform it more effectively than private enterprise. The government, therefore, should not restrict itself to those activities which are unsuited to private enterprise, e.g. protection, the administration of justice, and the providing of lighthouses. Fields where the profit motive prevails should not be closed to the government. At one time banking was considered a preserve of private enterprise, but in modern times the government has played an active role in banking, particularly central banking. "Profitableness" in the economic sense is no criterion as to whether or not the government should attempt to provide certain goods and services. In considering the welfare of society as a whole, it is difficult to determine where the line of demarcation between public and private enterprise should be drawn. As a matter of fact the accepted area of government operations changes, shows a tendency to increase, with the passing of time. As we have seen, the social welfare policies of today are a far cry from the laissez-faire philosophy of the mid-nineteenth century. The fundamental principle to consider is this: if the total amount of satisfaction resulting from the expenditure of funds by the government is greater than that which would obtain if the funds had been left in private hands, an expansion of public spending is justified.

In the light of the material presented in this chapter we might, with some purpose, attempt to classify government activities and consequently expenditures as: (1) *Developmental*, referring to such activities as education, road building, and various services of the Department of Agriculture; (2) *Protective*, covering national defence, courts and police, and regulative activities of government such as those involved in controlling combines, investigating labour disputes, and enforcing minimum wage laws; and (3) *Welfare*, or distributive, including relief, old age and widows' pensions, family allowance, unemployment insurance, care of insane, contribution to hospitals, etc.; (4) *Insurance of Economic Stability* through public works programmes, monetary management, fiscal policy, and other measures designed to promote full employment.

How Much Should Governments Spend?—Our study brings us inevitably to the question: How much should governments spend, what percentage of the national income? Are we encroaching too far upon individual incomes and the right of individuals to

spend their own money as they see fit? We are not ready to answer this question in any complete sense. Much depends upon the quality of the tax system of a nation (which we have yet to study), how taxes are laid and who bears the burden, as well as upon the nature of the public expenditures. Politically the answer is that in a democratic country with an intelligent electorate, the amount of money the government should spend depends upon what the people think it should spend. That is, upon the quantity and variety of services demanded from the government. While the people are the final judges in this matter, the economist can call attention to some of the economic effects of large-scale public financing.

Effect on Price Levels.—The mere fact that the government, rather than private individuals, is spending great sums of money does not, in itself, mean that the general price level will be affected. The manner in which the government secures the funds has an extremely important bearing on the problem. Here, indeed, we find the root cause of inflationary or non-inflationary public spending.

If the government obtains money through taxation and spends it, there is no inflationary effect. This assumes, of course, that the tax revenue collected by the government would have been spent by private individuals and organizations. The government is doing the spending *instead* of the persons and institutions from which the money was collected.

Again, if the government borrows money from individuals and non-bank organizations, the effect is the same as in the case of taxation. The government gets possession of and uses money which otherwise would have been privately spent. In both of the above cases, it is clear that the government merely displaces individuals and non-bank organizations as the spending agent. There is one qualification to our general conclusion *re* the non-inflationary character of the government spending just described. If the government secured, through taxation or borrowing, funds which otherwise would have remained idle, public spending would have an inflationary effect. At least, it would be anti-deflationary. In this case the velocity of circulation of money would be increased.

If the government borrows from the banking system and spends funds thus secured, the effect tends to be inflationary. When the commercial banks buy a new issue of government bonds (lend to the government), they create deposits payable to the government.

These new, or enhanced, deposits constitute a net addition to the circulating media and thus tend to cause an increase in prices. If the government borrows directly from the central bank (i.e. when the central bank buys government bonds), the inflationary tendency is accentuated. The new deposits payable to the government created by the central bank eventually become reserves of the commercial banks. This enables the latter to expand their loans and deposits several times the size of the central bank's loan to the government, depending on the reserve requirement.

While government borrowing from the banking system *tends* to be inflationary, the end result is not necessarily a spectacular rise in prices. If the government borrows and spends during a period of unemployment, an increase in the flow of goods and services will offset the augmented volume of purchasing power as more labourers find jobs. But as a condition of full employment is approached, the inflationary pressure of continued borrowing from the banking system becomes ever stronger. Under such circumstances the danger of a rapid and undesirable rise in prices is very real. It was the inflationary pressure incident to full-employment and shortages of consumer goods for civilian use which necessitated the price ceiling and rationing programme during World War II.

Effect on Consumption.—Heavy public financing which does not involve increased borrowing is to be regarded in normal times largely as a change in the direction of consumption. A citizen pays money to government to be expended in education, roads, or old age pensions which otherwise he would be spending in his own various ways. The reader should see it thus as a matter of alternative methods of spending. Do we get more utility or do we get less through the objectives and the methods of public spending as contrasted with private? The objectives are undoubtedly different in some degree. Or perhaps we should say the emphasis is different. It is true, of course, that many services, if not furnished by government, would have to be provided (and paid for) by private effort. Children would still require education. Automobiles would have to have roads. The indigent aged would be supported in some degree by charity. Some objects of public expenditure as we have them today would, nevertheless, be lacking, or, if provided, the service would be meagre and inadequate as compared with the present.² Scarcely

²The ideal of spending through government up to the point where marginal utilities of both ways of expenditure just equalize is an impossible one, even if desirable. Utilities are only comparable as experienced within the individual mind.

less vital than variance in objectives is the difference in method of spending. Which is able to obtain a desired service more economically? We have seen in Chapter v how incompetent the individual is in the modern situation to provide himself with various goods and services. Can the government do it better? The answer is that government has better facilities and command over specialists, etc., but has its own sources of weakness as choice-maker for the people. Nevertheless, we are of the opinion that spending is a matter that should be left, other things being equal, as far as possible with the individual or with the voluntary group. It is not in line with democratic living and the development of free and active personality to have consumption directed largely by the State, be its organization ever so happy and its spokesmen ever so representative. For that reason we should examine carefully all new forms of government expenditure. There are large areas where choices and emphases in expenditures should be retained for the expression of the individual mind.

A phase of the whole matter, which, whether we like it or not, calls for attention, is the practice of various groups within the larger state of seeking special favours from government. Populations living in particular areas especially are guilty of attempting to draw central governments into all kinds of expenditures that can only be counted unwise from the standpoint of a whole people, provided only that the funds be distributed in the local area. Thus provinces prey on federal funds and municipalities upon provinces. Similarly, special industries and occupational groups turn hungry eyes on funds derived from general taxation. These particularistic pressures, deriving as they do from desires less restrained and less balanced than those involved in private choices, no doubt do much to weaken the merit of public expenditures. Public financing in Canada seems too much victimized by just this attitude. To spend well publicly we must think generously and in terms of the whole society.

Public Expenditures as Affecting Production.—This topic has already been dealt with and the merits of public production weighed against private. Attention should be called, however, to those expenditures devoted to the development and conservation of resources both natural and vital which look to the future productivity of the nation rather than the present. Protection and development of forests and fisheries are of this category and funds spent in such

manner usually commend themselves in the long-time view. This topic will receive further attention in the next chapter.

PUBLIC REVENUES

The chief forms of revenue in modern states are taxes, fees, licences, royalties on public resources, special assessments, and profits on public industries. Government borrowing, though it plays a great role in distributing expenditures in time, is not to be considered as revenue in the true sense. Loans must be paid sometime or carried as a liability of the State. Similarly, funds from the sale of public lands is not a revenue. It is to be regarded as a change of assets. Public revenues may be defined as governmental receipts which result in an increase in the aggregate assets of a government without causing a corresponding increase in the liabilities.

Government Industries and Rate Policy.—For the most part government industries enjoy a monopoly position. For this reason it is possible to name a price for their commodities or services well above cost, at cost, or below cost, and still retain the market. In private business the tendency of the monopolist, as we have seen, is to set his price to achieve the highest net gain. With government, however, this rarely follows. Profit is not its motive. Profit on a government enterprise means taxing the consumers of this particular commodity for the benefit of the rest of the community which amounts to unequal treatment of citizens. In rare cases, however, an enterprise is run for profit. The classic example is French tobacco. In France the growing of tobacco is permitted only to properly licensed persons in each district. Manufacturing is done in state factories and the products again are sold under a system of licensing. In order to maintain prices high enough to bring in any considerable profits, prohibitive duties are raised against imported tobaccos. The system is very productive of revenue though it forces upon the people a low quality product and prevents the Government from collecting excise duties on what in other countries is the best yielding commodity. The salt industry has also been used in some countries as a revenue maker, and recently alcoholic beverages are bringing in returns to several provincial Governments in Canada.³ Our Government railroads, on the other hand, have been at times a drain on the treasury. Notwithstanding these

³See F. Hankin and T. W. L. MacDermot, *Recovery by Control* (Toronto, 1933), chap. vi.

examples it is true that the usual way of financing government industry is, as with our post office, to arrange prices and costs to break even.

The Nature of Fees, Special Assessments, etc.—The other forms of revenue that we have named have this in common that they all represent compulsory contributions exacted by the State. Fees, licences, and royalties, however, allow a larger measure of individual volition than do taxes. A man does not have to pay a fishing licence, unless he chooses to fish. He does not have to buy a marriage licence or pay a coal royalty unless he chooses to get married or to mine coal. In this sense fees, licences and royalties may be likened to prices of other goods and services. We expect to pay for all commodities if we would possess them. There is this difference, however, that fees, etc., are incidental and usually minor charges rather than being true prices. Fees have been defined as "compulsory contributions exacted by the State to cover a part or all of the cost of doing something required by the presence and activities of a special class, or from which the fee-payer receives or is presumed to receive a special benefit, in addition to the general benefit which is the justification for the State's performing the service."⁴ The student should note the assumption of the general benefit in the definition as well as the special benefit. In some cases it is more prominent than in others. When a constable or assessor or inspector collects a fee, it is likely to be more in evidence than the special benefit. In other cases the special benefit is to the fore. Fees are not nearly as important as they used to be when a larger proportion of regulative activities were carried on by persons appointed by government whose remuneration thereafter took the form of fees. Licences, which are permits to carry on certain lines of activity, have taken on additional importance in recent years due to the automobile and radio. They have long been associated with the privilege of participating in commercial selling of certain lines of goods, such as liquors, drugs, etc.

Special Assessments.—Special assessments are associated with public improvements that are assumed to increase the value of the property assessed. They are payments made to the government by owners of real estate to cover part or all of the costs of such improvements which are presumed to enhance the value of the property by more than the amount of the assessment. Permanent improvements in Canadian cities, involving sidewalks, roadways,

⁴Jens P. Jensen, *Problems of Public Finance* (London, n.d.), p. 112.

sewers, etc., are not as a rule financed directly out of general taxation. In Ontario sidewalks and pavements are built on the basis of frontage, the municipality assuming only the cost of intersections and on corner lots the cost of flankage up to one-half of its amount, but not in any case to exceed sixty feet. There are considerable variations among the different provinces and also, through differing allowances in the local improvement laws, within the same province, in the proportions of the total expenditure which are paid out of general taxation.

Special assessments are generally well regarded as a device for raising revenue for these limited purposes. If properly planned, they represent a gain to the property holder as well as to the public. For the former they provide the use of large-scale equipment and its operation which otherwise he could not utilize. They are, in fact, a means toward compulsory co-operation.

Taxes.—Most important of all forms of revenue in the modern situation are taxes. They may be defined as compulsory payments collected by the government from individuals or corporations in order to defray the cost of general public activities, without reference to the specific expenditures involved or the benefit enjoyed by the individual taxpayers as the result of the state activities. The emphasis, it will be noted, is upon the general welfare of the community. Contributions are exacted in accordance with the idea that the taxpayer owes something to the State of which he is a member. Presumably he derives a benefit through state activities but nothing specific need be shown. Taxpaying is a civic duty. This is in line with modern thought regarding the relation between the State and its citizens. No longer is that relation looked upon as a social contract whereby each party has the right to expect a *quid pro quo* for every dollar given or service performed. The State is viewed rather as a means to social unity and a device to promote mutual assistance and the collective efficiency of its people. In this change in political philosophy as well as in the increased complexity, intangibility, and inequality of modern economic life we find the reason for the change from the older financing by means of licences, fees, and tolls to that of general taxation.

There are many different kinds of taxes as we shall see. There are income taxes, inheritance taxes, taxes on real estate, taxes on commodities, to mention only the main categories. In fact, almost anything may conceivably be the object of a tax.

Canadian Federal Revenues.—The British North America Act allows the Dominion Government to raise money "by any mode or system of taxation." The provinces are permitted to levy direct taxation within the province in order to raise revenue for provincial purposes and to enact shop, saloon, tavern, auctioneer, and other licences in order to provide funds for provincial, local, or municipal purposes. Before the Great War, the Dominion Government levied few taxes apart from customs and excise duties and a head tax on Chinese immigrants. The provinces derived their chief revenue from Dominion subsidies, the yield from forests, fisheries, and mineral deposits, succession duties, taxes on corporations, and licence fees.

The relative yield of these different taxes and also the changes which have taken place from time to time may be seen from Table xxxvii, p. 640.

The reader will observe from these figures the steady trend of excises as compared with the fluctuating nature of customs, and the emergency use of the business profits tax during World War I and its reimposition in World War II as contrasted with the continued use of the income and sales tax. One of the striking developments brought out by Table xxxvii is the immense growth in the yield from the income tax on individuals and corporations, particularly the former. Between 1938 and 1947 the revenue from personal income tax increased by almost 1,300 per cent, and that from corporation income tax by approximately 314 per cent. Succession duties, which were first imposed by the Dominion government in 1941, show a small but expanding yield.

The data presented in Table xxxvii suggest that Canada failed to meet any large part of the expenses of World War I in the earlier years of that conflict. In fact, the total taxes collected for each of the years 1915 and 1916 were less than in 1913.⁵ This is in striking contrast to experience during World War II when revenue from taxation as a percentage of total expenditure ranged from 68.7 per cent in 1940 to 41 per cent in 1945.⁶ During this period income from taxation averaged 56 per cent of total expenditures. Generally speaking the government was able to finance approximately half its budgetary requirements from revenue sources during World War II. The remainder, of course, was secured by borrowing.

⁵Revenue from taxation in 1915 was \$97.5 million, in 1916, \$124.7 million.

⁶See *Canada Year Book*, 1947, p. 962.

TABLE XXXVII

REVENUE SOURCES OF CANADIAN FEDERAL GOVERNMENT*

(Millions of dollars)

	1900	1913	1917	1921	1925	1929	1933	1936	1938	1942	1944	1946	1947
REVENUE FROM TAXATION:													
Income tax on individuals...				32.0	25.0	25.0	26.0	40.0	50.0	296.1	698.4	686.6	695.0
Income tax on corporations...				24.0	31.0	34.0	36.0	43.0	70.0	185.8	311.4	217.8	239.0
Excess profits tax			12.0	41.0	3.0	0.4				135.2	428.7	426.7	441.5
Withholding tax on dividends, interest, etc.										28.3	26.9	28.3	30.1
Succession duties										7.0	15.0	21.4	23.6
Excise on liquor										47.5	65.9	92.0	99.0
Excise on tobacco										68.3	138.8	171.7	182.7
Sundry excise and other taxes	10.0	21.0	24.0	37.0	39.0	64.0	38.0	44.0	52.0	113.3	159.9	175.5	204.5
Customs import duties	28.0	112.0	134.0	163.0	108.0	187.0	70.0	74.0	93.0	142.4	167.9	128.9	237.4
War exchange tax			2.0	79.0	86.0	58.0	82.0	113.0	182.0	100.9	118.9	41.2	3.3
Sales tax										236.2	304.9	212.2	298.2
Total revenue from taxation	38.0	133.0	172.0	366.0	292.0	393.4	252.0	314.0	447.0	1,361.0	2,436.7	2,202.3	2,451.3
Post Office Department (net)										4.5	12.6	10.9	9.0
Other ordinary revenue										19.2	23.9	21.3	17.1
Total ordinary revenue										1,384.7	2,473.2	2,234.5	2,477.4
SPECIAL REVENUES:													
Net revenue from operation of Crown Companies												70.6	30.0
Sales of surplus war assets...											37.5	42.6	182.4
Refunds from war contractors											6.2	36.6	50.0
Other refunds of previous years' war expenditure										16.9	97.7	77.8	38.0
Other special revenue											12.6	17.5	21.5
Total revenue										1,401.6	2,627.2	2,479.6	2,799.3

*Sources: Dominion Bureau of Statistics, *Canada Year Book*; Bank of Canada, *Statistical Summary*, Apr.-May, 1947.

Public Revenues.—Further discussion of the various types of taxes imposed by the Dominion government will be found in subsequent pages of this chapter. But first we shall make a brief survey of provincial and municipal revenue systems.

Provincial Revenue.—There is a striking difference between Dominion and provincial revenue systems.⁷ Furthermore, as a

TABLE XXXVIII

CURRENT REVENUE OF CANADIAN PROVINCIAL GOVERNMENTS*
(Millions of dollars)

	1926	1933	1939	1944	1946
FROM THE PUBLIC:					
Taxes on income of individuals....	1.5	5.2	12.1	.6	.2
Taxes on corporation profits.....	1.6	3.2	11.1	.3	.1
Other corporation taxes.....	11.9	16.0	21.3	.4	.6
Revenues from public domain....	21.3	12.8	24.0	35.0	48.6
Succession duties.....	15.7	12.8	27.8	23.5	32.2
Liquor revenue (net).....	16.4	16.4	33.4	70.4	110.4
Tobacco tax.....	..	..	..	5.0	6.3
Amusement taxes.....	4.9	3.2	2.6	5.7	7.1
Gasoline taxes.....	6.5	26.2	53.1	47.1	74.1
Motor vehicle licences.....	15.9	20.6	28.1	31.0	34.7
Taxes on real property.....	9.5	5.5	6.8	7.8	6.7
Retail sales taxes.....	..	..	2.7	17.9	26.1
Miscellaneous taxes.....	2.3	2.6	2.6	4.2	6.1
Licences, permits and fees (ex. motor vehicles).....	7.8	7.7	9.0	11.1	12.9
Other revenue.....	2.5	2.4	2.9	3.6	8.4
Total from the public.....	117.8	134.6	237.5	263.6	374.5
FROM THE FEDERAL GOVERNMENT:					
Subsidies.....	12.5	13.7	13.7	14.4	14.4
Interim grants.....	..	1.6	6.1	..	..
Transfers under Fed.-Prov. tax agreements.....	..	..	..	80.7	80.7
Gasoline tax guarantees.....	..	..	..	10.6	.1
Common school and school lands funds.....	2.2	1.9	1.6	1.6	1.6
Total from federal government	14.7	17.2	21.4	107.3	96.8
TOTAL CURRENT REVENUE.....	132.5	151.8	258.9	370.9	471.3

*Source: Bank of Canada, *Statistical Summary*, Aug.-Sept., 1947, p. 93.

⁷See H. R. Kemp, *Annals of the American Academy of Political and Social Science*, May, 1923.

result of attempts on the part of each province to devise a revenue scheme to meet its own needs, there is a noteworthy lack of uniformity among the provinces themselves. For example, Quebec has a retail sales tax which was imposed in 1940. Ontario has no such levy. The chief sources of revenue, taking the provinces as a whole, are portrayed in Table xxxviii.

An examination of the above table reveals that whereas the income tax on individuals and corporations plus other corporation taxes yielded \$44.5 million in 1939, they accounted for only \$0.9 million in 1946. The fall in revenue from these taxes was a result of the Dominion-Provincial Taxation Agreement Act passed in 1942. Under the provisions of this Act each province agreed to discontinue the use of income and corporation taxes for the duration of the War and for a certain readjustment period thereafter in return for a Dominion subsidy based on either (1) the cash collected on account of these levies in the fiscal year ended nearest December 31, 1940, or (2) the cost of the provinces' net debt service, less succession duties collected for the same period. As a result of these agreements, and the guarantee of provincial revenue from gasoline taxation by a further provision of the same Act, the Dominion Government from 1942 to 1945 was a major source of provincial revenue. As shown by Table xxxviii the Dominion's contribution to provincial finances was exceeded by only one item in 1946, namely, revenue from the sale of liquor. Returns from the public domain, gasoline taxes, and motor car licences are also substantial revenue yielders.

On the whole, the war period was one of unprecedented prosperity for the provinces. In the five-year period, 1940-4, provincial net ordinary and capital revenues increased by almost \$114 million. The high employment of the period brought a decline of more than \$30 million in the direct cost of relief. The improvement of provincial finances was reflected in the fact that the gross direct debt was reduced by over \$84 million between 1940 and 1944. In the latter year the net debt charges were 4.6 per cent lower than in 1943. The reversal in the rising long-term trend in debt charges was the result of debt retirement and lower interest rates.

Municipal Revenues in Canada.—As in the case of provincial taxation so it is true also of Canadian municipal taxation that great differences as to form and method exist among the provinces and to some extent among the cities of the same province. The one tax

common to all municipalities is the tax on real estate and with this there are great differences with regard to the taxation of improvements. In the Western Provinces generally the method of assessment is arranged to bear lightly upon improvements. Only since 1919 have the municipalities of British Columbia had permission to collect upon them at all. Notwithstanding this tendency to bear lightly upon realty improvements, real estate has been and still is the backbone of municipal taxation, especially in the smaller cities. On an average it runs to about 90 per cent of the whole—apart from special assessments.

The next most general form of municipal taxation is probably the business tax, though it is generally lacking in the Maritime Provinces and in British Columbia. In form it has many variants. In Ontario it is based on the value of the land upon which the business is located and is levied against the occupiers whether they are owners or lessees. The Act provides for differentiated assessment according to the nature of the business.⁸ In Quebec it is assessed as a flat percentage of rentals of premises. In the West the more general method is to lay it according to floor space occupied. Each method has its advantages and disadvantages. No one of them can be said to meet entirely the requirements of a good tax.

Before the Dominion-Provincial Tax Agreements of 1942, the income tax was an important source of municipal revenue. Prior to that date, many people were subject to both provincial and municipal income taxation. Now this system, or lack of it, has practically disappeared. The municipalities receive a subsidy from the provinces in lieu of income tax revenue. The Maritime Provinces, Manitoba, and Alberta, impose a personal property tax. This is not a particularly satisfactory tax because of assessment difficulties and ease of concealment. The chief sources of municipal revenue are portrayed in Table XXXIX.

The data in Table XXXIX show the relatively heavy tax burden placed on real estate owners. It has been estimated that of the total municipal revenue received in the year 1944, 74.4 per cent represented taxes on real estate, 9.6 per cent other taxes, and the remaining 16.0 per cent other sources of revenue, including

⁸Assessments for the purpose are as follows: distillery land at 150 per cent of value; brewery land at 75 per cent; land of wholesale merchants and financial institutions, 75 per cent; of manufacturers, 60 per cent; of department stores and professional firms, 50 per cent; retail merchants, 25-35 per cent; railways, 100 per cent. For the background experience which led to this arrangement, consult S. Vineberg, *Provincial and Local Taxation in Canada* (New York, 1912)

provincial subsidies and Tax Agreement Subsidies from the Dominion.⁹ The situation was substantially unchanged in 1946.

TABLE XXXIX

CURRENT REVENUE OF CANADIAN MUNICIPAL GOVERNMENTS*
(Metropolitan, Other Urban and Rural)

Calendar years	1944	1945	1946
	(\$000,000)	(\$000,000)	(\$000,000)
Real property tax.....	265.7	262.4	276.1
Sales tax.....	8.0	9.0	11.6
Other taxes.....	25.5	26.0	28.2
Total taxation.....	299.2	297.4	315.9
Licences, permits and fees.....	7.8	8.2	9.3
Public utility contributions.....	17.1	17.5	17.1
Other.....	34.2	35.7	39.2
Total revenue.....	358.3	358.9	381.5

*Source: Bank of Canada, *Statistical Summary*, Oct.-Nov., 1947.

Shifting and Incidence of Taxes.—Taxes are not always borne by the persons who pay them in the first instance. In fact, they may be passed along several times before they rest on the final tax bearer. When the taxpayer thus manages to force someone else to reimburse him for the tax he has paid, he is said to shift the tax; and the incidence of the tax is said to be on the person who cannot shift it further. Some taxes are shifted quickly and with comparative ease; others are shifted only after considerable periods; some cannot be shifted at all. Some taxes are shifted wholly, others only in part. It is scarcely necessary to remark that an understanding of shifting is important in developing a just and well-proportioned system of taxes.

Taxes can be shifted by means of adding them to prices of goods or services sold by the taxpayer or by causing them to be deducted from the prices of goods that he buys. Where there are no prices involved directly or indirectly taxes cannot be shifted. Thus an import duty laid upon tea imported into Canada would not rest finally upon the importer. He would probably add it to the price as he offered the tea to the merchants buying from him and they in turn would pass it on through the retailers to the final consumers.

⁹Department of Trade and Commerce, *Canada*, 1947, p. 238.

This is called shifting "forward" and is probably the usual condition with commodity taxes. On the other hand, the importer, conscious of the elasticity of the demand for a product, might refuse to add it to his price and by refusing to buy the commodity under these conditions of increased cost might succeed in forcing the foreign producer to sell it to him for a price lower by the amount of the tax. This is called shifting "backwards." Generally speaking, it is more rare than forward shifting when we refer to the shifting of an entire tax. Probably there are many cases where the incidence is divided, featuring both backward and forward shifting. Elasticity of demand and elasticity of supply are determining factors in the direction of shifting. Commodities of elastic demand will discourage forward shifting. The seller or importer will endeavour to shift the tax back rather than lose too many sales. He may even absorb some part of it himself and operate on smaller margins. Commodities of elastic supply will correspondingly defeat backward shifting. Conditions of cost are also influential. A tax on a good produced under increasing cost, other things being equal, is more likely to be shifted forward in its entirety than is one produced under decreasing costs. A tax on a good produced or traded in by a monopolist will not usually be shifted wholly, but will be governed by various circumstances of the analysis above. A tax levied against a monopolist corporation itself will be borne wholly by the corporation since the price at which it has been selling its commodity is already the price yielding the maximum net profit and any addition to the price would lower the profit.

A tax on city realty in so far as it concerns dwellings will be borne by landlords and owner-occupants for a considerable period but will work through to an increase in rents after a few years due to the developing scarcity of houses. In so far as it concerns land, it cannot be shifted but the incidence will be permanently on the present owners.

A tax on net incomes, as it stands in Canada, cannot be shifted. but a tax on low or marginal wages would be after a time through creating a scarcity of labour in this class and so raising wages. Likewise, an income tax limited to some special group—say professional men—would tend to be shifted over a period of years through limiting their numbers and enabling an increase in salaries or fees.

John A. Hobson, British economist, makes much of the distinction between income which ranks as costs necessary to the production of a good or service and income which ranks as surplus (not

necessary to such production). Thus, lowest wages will not bear the incidence of taxation and standard wages of a higher order, as, for instance, those defined through long years of experience by organized labour, will battle strenuously against accepting the burden. Likewise, a minimum standard of interest and even some necessary remuneration as profits are among the costs requisite to the supplying of sufficient capital and entrepreneurship for the present economic order. Trespass upon any of these by taxation would create scarcity of the services and set in motion remedial price rises.

Surplus incomes, on the contrary, are those which are not essential to the continuing supply of any good or service. Such are economic rent of land, the high returns to householders in areas of restricted competition in building, temporary profits where factories are engaged to build war materials at unregulated prices, and the many differential and monopolistic types of gain which characterize modern industry and trade. It is Dr. Hobson's position that all surpluses should be objects of taxation while all "costs," for the sake of production, should not be taxed.¹⁰

Principles of Taxation: Good Taxes and Good Tax Systems.—

The principles of taxation are developed around the norms of justice and efficiency, meaning by the latter the effect upon the productive and social efficiency of the nation taxed. These two must not, however, be thought of as mutually exclusive since we usually find that where taxes are justly laid, this fact in itself contributes to efficiency. In attempting to evaluate different forms of taxation and to lay down a set of principles for the distribution of the burden, it is necessary to distinguish between individual taxes and tax systems, for the rules that apply in the one case do not always hold for the other. A country might be found using a number of meritorious taxes and still have a poor system. On the contrary it might have taxes which taken singly were patently unjust and inadequate, but which in company with others of dissimilar type present a well-rounded and effective system. A good tax is one that is *just*, that is productive of a good and *reliable yield*, is *socially expedient*, and *convenient and economical* of administration. By the last we mean convenient as to time and manner for the one who has it to pay and requiring a minimum of expense for collection. A tax, to be economical, furthermore, must not dry up the source from which it is drawn. A tax on business, for instance, may be laid in such a way and in such drastic terms as to weaken production or drive enterprise out of the

¹⁰John A. Hobson, *Taxation in the New State* (London, 1919), chap. II.

country. The recent tax by the federal Government of the United States on undistributed surplus, for instance, has been criticized for reducing capital investment. In order to escape paying so much of their profits to the government, corporations began paying them out as dividends and salaries rather than building them back into the business. A guiding principle here, although obviously it does not cover the whole problem, is Professor Hobson's rule referred to above, of taxing as far as possible only what is unnecessary to production. Again taxes on improvements where they are heavily imposed are liable to be uneconomic through discouraging people from making improvements.

By productive and reliable taxes we mean those that are not only productive in the present but regular in their yield and dependable in time. Social expediency must also be taken into account, inasmuch as social welfare may be promoted or endangered as a result of certain kinds of taxes. In other words, fiscal considerations are not the whole story in the evaluation of taxes. Inequality may be promoted or decreased according to the taxes used. Consumption may be affected or controlled. Valued institutions may be favoured. Some economists have maintained that these social results should have no place in taxation policy—that its whole concern should be the deriving of revenue. Practically, however, it seems impossible to neglect the various effects when a line of action is plural in its results. It is possible, nevertheless—indeed it is desirable—to distinguish and to evaluate separately the revenue aspects of a tax from its social or political aspects.

A good tax system as contrasted with a good individual tax has been laid under the necessity of answering to certain requirements. Some of these, it will be seen, have already been covered in characterizing the "good tax." Following Professor H. L. Lutz, we find the following "marks" necessary: *adequacy, economy, justice, simplicity, elasticity, and plurality*.¹¹ Referring to the last three, Mr. Lutz argues that no single tax is likely to give satisfaction as a tax system, but, on the other hand, there is a danger of too great complexity. Consequently, he uses the terms simplicity and plurality. Again, a system should have some of its elements at least capable of easy expansion or contraction to meet changing national needs. Some taxes are largely uncontrollable in this respect except over long periods of time. These may well have their place in a system, provided they are supplemented by others that may be readily increased

¹¹H. L. Lutz, *Public Finance* (New York, 1936), chap. xvi.

or decreased. The duties on tea are said to be used for this purpose in Great Britain. By changing them conveniently receipts are made to equate with expenditures. They provide the system with the necessary elasticity. Adequacy again is a most important consideration. It is sometimes set over against equity or justice in taxation discussion, the one representing the practical, the other the ethical. It is an impelling requirement from the point of view of the statesman. Sufficient revenue must be obtained. Let it be just as far as practicable but adequate to the national purpose it must be. In reality taxes and systems of taxes, therefore, persist which fall far short of being just in the distribution of the burden. Old taxes, being more productive than new ones, are allowed to remain. Economy has already been dealt with in the preceding paragraph. Adequacy, economy, elasticity, simplicity—all these are relative to efficiency, which, as we stated at the outset, ranks with justice as one of the two norms of taxation. To the subject of justice we now direct our thought.

Justice in Taxation.—In order to lay taxes and to develop tax systems justly, it is necessary to give attention to three considerations. One approach to justice is to apportion taxes in relation to personal *benefits* enjoyed from expenditures. Special assessments, we have seen, are made against those whose property values are enhanced by street improvements. Gasolene taxes are thought of as applied to the building and repair of highways and are, therefore, justly paid by the people who use highways. This principle is, however, incapable of general application. We all benefit indirectly from good roads whether we drive cars or not and no one can say how much in each case. Likewise, we all benefit from schools whether we use them personally or not or whether or not we have children. As stated earlier in this chapter, in these times of unequal wealth ownership and of baffling complexity of economic living we are paying less attention to the rule of benefits than formerly.

A second approach to justice is to distinguish between *earned* wealth or income and *unearned*. Let taxes fall heavily on the unearned elements in our national income—take them all if necessary—but spare the elements that are earned. This seems like a fair proposition especially if we assume that all people have adequate earning power. It also favours productive efficiency as well as justice for it surely is in line with stimulation of effort. It is, in fact, the producers' concept of justice. It would leave the fruits of toil to the toiler.

The difficulties here are two: first, who shall say what is earned in a capitalist economy? Second, according to our present scale even of paid and hence presumably earned wages, taxation proportioned on remuneration would fall too heavily on the lowlier workers. In other words, our world is too unequal in its abilities and in its opportunities, whereas the needs of people are too nearly alike to accept this as a single norm of justice. Nevertheless, we are of the opinion that some application of the principle is entirely healthful.

Our third consideration and the norm most generally supported by present-day economists is that of *ability*, or, to express it more completely as a consumer's concept, *equality of sacrifice*. Taxes should be laid, according to one interpretation of the ideal, so that the total disutility suffered by each person in the payment of his taxes would be the same as that of every other. The widow's mite would rate with the rich man's million. Or, according to others who centre their attention on the marginal utilities of each dollar given up, that the lowlier two-thirds of the population should pay nothing so long as any single dollar meant more to them than to the wealthier man. It will be noted that we have here two very different conceptions of equality of sacrifice. It will also be appreciated that neither of them is possible of measurement and, therefore, of realization. Some of the radically minded, fixing upon the second interpretation, would use taxation and public expenditure as a means of social equalization, taxing drastically and spending freely until they had brought the marginal utility of the dollars in the hands of all the people to relative equality. Such an ideal, while it might serve as a mark to shoot at, is mathematically impossible. We know little of marginal utilities as between persons.

This principle of ability or equal sacrifice is, nevertheless, of great importance as a practical concept. The assumption is that ability to pay runs in some direct relation with income, and taxes are figured on that assumption. But precisely what is that relation? And how shall it be calculated? Here we have to distinguish between *proportional* and *progressive taxation*. Students of public finance of last century were attracted to the idea of having taxes laid as nearly as possible in exact proportion to people's incomes. This was their way of measuring ability. Thus a man with an income of \$10,000 per year would be asked to pay just ten times as much taxes as another man getting \$1,000. But more recent writers have objected to this as not fulfilling the ability ideal. They contend the \$10,000 man should pay more than ten times what the other contri-

butes. Tax rates should be progressive as the income gets larger rather than proportional. The modern income tax is closer to their fancy. Progressive taxation is undoubtedly necessary to satisfy the equality of sacrifice principle.

Many of our taxes, as a matter of fact, are neither proportional nor progressive. They are regressive in their incidence, which means those of smaller incomes pay more in proportion than those of larger. Taxes on tea and sugar, for instance, are *regressive*. The poor man pays as much of such taxes as the wealthy. They fall especially heavily on poor people with large families. Our tax systems today include a mixture of progressive and regressive elements. Where the regressive elements destroy the progressiveness of the system as a whole, the system is to be condemned.

Customs Duties as Revenue.—We have already commented on the important place that customs duties have had in our federal revenue system. Reference to Table XXXVII will show that the proportion of customs to total revenue has varied from (approximately) five-sixths in 1913 to two-fifths in 1925 to one-fifth in 1936 to one-tenth in 1946. The wide variation in receipts from this source are accounted for partly by war, but, in time of peace, by the fact that customs revenues are, in countries like Canada and the United States, largely incidental to protection of home industries. The history of revenues in the latter country brings out this lesson in bolder relief even than does that of Canada. For example, in 1837 customs receipts equalled 29.9 per cent of expenditures for the year, while in 1845 they amounted to 119 per cent. The frequently overflowing treasury largely due to a tariff unco-ordinated with revenue requirements has often been pointed to by American economic historians as a cause of reckless squandering through so-called "pork-barrel" appropriations.

England, on the contrary, with her historic preference for free trade, has shaped her tariff, until recently, in accordance with the purpose of getting government revenue. This has been done by placing duties upon commodities not produced inside the country, or, in cases where they are produced at home, through laying excise duties on the home-produced article equal to the customs duty on the part imported. Thus, in 1925-6 the customs revenue for the United Kingdom amounting in all to £104 million was derived largely from the following leaders:

From tobacco and snuff, £54 million (approximately)

" sugar,	8	"
" spirits,	6	"
" tea,	6	"
" wine,	4	"
" silk,	3	"

A *tariff for revenue only* thus lends itself better to taxation purposes. The commodities may be selected carefully from the standpoint of their capacity to yield revenue. They are usually limited to a small number. Such a tariff can be easily adjusted to the country's revenue needs. A tariff that is constructed mainly for protection on the other hand, and only incidentally for revenue, very often consists of hundreds of dutiable articles, some of which yield high returns while others do not pay the cost of collecting them. High protective tariffs, moreover, may or may not yield more revenues than lower tariffs. In so far as a duty is high enough to protect adequately the home product, i.e. to enable it to hold the home market completely against the foreign product, there will be no revenue forthcoming.

A further characteristic of customs duties as they are usually laid, which is unfavourable from the standpoint of taxation, is their regressiveness. For the most part, the incidence is upon the consumer who buys the commodity and in so far as they are laid upon the articles of common consumption the low income man with a family is liable to be paying as much to the government through the increased price as the wealthy man.

Writers on taxation aiming to avoid these various weaknesses have laid down certain principles for the guidance of statesmen in framing tariffs satisfactory for revenue. The chief of these are as follows:

- (1) There should be comparatively few commodities, wisely chosen.
- (2) Rates should not be so high as to prohibit large quantities of the dutiable article from coming in.
- (3) The commodities chosen should be semi-luxuries of wide general consumption.
- (4) They should be characterized by a comparatively inelastic demand.
- (5) They should be articles of wholly foreign production or else supported by compensatory excise taxes on the same articles produced at home.

Remembering the history of customs tariffs as they have been, however, writers in protected countries have condemned them as uncertain in yield, uncontrollable, and regressive.

While customs duties still yield a substantial sum to Canada's federal treasury, they have declined in relative importance. They have also fallen from pre-eminence in the United States. In that country during 1946 the yield from customs duties constituted only 1.1 per cent of federal revenue, whereas the personal income tax accounted for 45.5 per cent. Prior to the Civil War customs duties were practically the sole source of revenue to the American federal government.

Excise Taxes.—Taxes levied on special commodities at some stage before they reach the final consumer are called excise taxes. They may be assessed at some selected stage during production while still in the hands of the manufacturer or perhaps later while in possession of wholesaler or retailer. But in any case it is expected that the tax will be shifted. Usually the government collects such a tax through the sale of stamps which the manufacturer or merchant affixes to the article. It is thus economical in the sense that it costs little to administer. The fact that stamps are so affixed and are paid for by the consumer does not necessarily mean that the latter bears the whole burden. Tobacco companies, for instance, sensing elasticity in the demand for smoking tobacco, might, as a result of a new tax, lighten their demand for the raw tobacco and force the growers to take less. A monopolist manufacturer might absorb some part of the tax himself. In the main, however, excise taxes fall finally upon the consumer. As a matter of fact, the commodities selected as bases are usually chosen largely with a view to consumers' acceptance of the burden without reducing their purchases, though it should be said that paradoxically they are frequently goods whose consumption has been held in social disfavour traditionally and taxes on them have been justified on the grounds that their use would be discouraged. Excise revenues in Canada are derived chiefly from tobacco, spirits, and malt used in the manufacture of beer.¹² These are important revenue yielders. In 1940 the federal government's income from the leading commodities was as follows: tobacco (including cigarettes), \$40 million; malt, \$11 million; and spirits, \$12 million. The respective yields in 1945 were \$83 million, \$35 million, and \$32 million.

¹²Gasolene taxes collected by our provinces are in essence excise taxes, although constitutionally commodity taxation is exclusively the right of the Dominion.

All these taxes, it will be appreciated, are very regressive and apart from ready yield and from health and moral considerations have little in their favour. Excise taxation conceivably might be developed on a fairly progressive basis through careful selection of commodities.

The Sales Tax.—The sales tax is a development of the Great War and post-war periods, being first resorted to by Germany in the war years. Subsequently, it has been widely adopted especially in Europe, and in practically all cases has taken a prominent place as a revenue yielder. In 1926-7 it was accountable for about one-fifth of the total tax revenue in France, Belgium, Austria, and Czechoslovakia and for more than that proportion in Canada. It ranks, therefore, with the income tax as one of the chief fiscal developments of modern times. Canada and Australia, however, are the only English-speaking nations where national governments use it. The tendency in recent times both in Britain and the United States has been toward a greater use of direct taxation, and the statement has been made that the sales tax is out of line with their philosophy of taxation.

The sales tax as developed in the various countries differs somewhat in form. A thoroughgoing sales tax would be a tax on all sales or turnover. But existing sales taxes all make some exemptions. The European laws are mostly true turnover taxes, being made up on the gross receipts of the business, having allowed first for the sales of commodities exempted. Canada's tax is differently devised. It is a manufacturer's and wholesaler's tax but is not laid against retailers' sales. It is, moreover, collected as a tax on individual transactions as distinguished from gross turnover. Originally, it was intended to take at least 2 per cent on all goods, except exempted articles, sold for consumption. It specifically exempted bread, flour, meat, milk, butter, grain, and a list of other foods, fuel of all kinds, lumber, newspapers, etc. With the exception of clothing it thus relieved from the burden of the tax the chief necessary items entering into the ordinary family budget. The list of exempted articles is, however, always susceptible to revision and might easily be reduced in case of emergency. The rates have been changed many times reaching a 6 per cent minimum total in 1922-3 and subsequently declining step by step with the lessening need of revenue. During the depression the rates were stepped up again first to 4 per cent, then to 6, and finally in 1936 to 8 per cent.

In favour of the sales tax it can be said that it is prolific, com-

paratively certain and regular, elastic, and easy of administration. On the other hand, it fails to meet the ability test: in so far as it passes entirely to consumers it falls inequitably. In so far as it does not shift it is grossly discriminatory as between different producers since gross sales are no measure of tax-paying ability. It tends to weigh heavily on enterprises of large turnover at low profit. It is argued that it puts a premium on business integration inasmuch as integrated business has fewer sales in completing the production of the commodity. Canadian experience has shown that the cumulation of the tax in the case of such commodities as shoes, which pass through the hands of several producers in the course of manufacture, is burdensome. Canadian firms manufacturing for export claim that they are handicapped for competition with American firms.

Of these disadvantages the first named is probably the greatest. Though guarded against by exemptions this is still a very real weakness, making it inferior to selective excise taxation. Professor Jensen declares it to be defensible only as an emergency measure.

Income Tax.—The most important development in taxation in recent times in Canada and the United States has been the introduction of the income tax. Introduced into the United States by the Wilson Administration in 1913, it has become by long odds the most important form of federal taxation, and is used also to a considerable degree by the state Governments. Although the smaller number of large incomes in Canada makes its proportion to total receipts less than in the United States, it nevertheless has become an important factor in federal taxation since World War I and until recently in the majority of the provinces. While a late comer to this continent, the income tax has long held an honourable place in the revenue system of Great Britain. It has been pointed out that taxes are eventually paid out of income anyway, no matter how they are assessed, and that logically, therefore, they may as well be assessed directly against income. Doubtless, it is true that if any one form of tax were to be relied upon entirely, income would make the best thing to assess. Moreover, income taxation lends itself well to progressiveness and hence conforms to the ability requirement. The degree of progression in the Canadian federal tax is shown in the statement below. Progression involves increasing the percentage taken as larger and larger incomes are considered as well as the practice of exempting a certain amount before any tax applies.

Canadian Personal Income Tax.—The Canadian federal income tax instituted as part of the war-tax structure in 1917, has been

retained as a permanent element in the Dominion's fiscal system. Before the outbreak of World War II, it had become one of the most important sources of raising ordinary revenue. The tax incorporates the progressive principle. At present (1948) the personal income tax law provides exemptions to \$750 for single persons and \$1,500 for married persons. There are also concessions with respect to dependents. Reductions in the extremely high wartime rates commenced with the 1945-6 budget. But, for reasons already indicated, the postwar income tax is likely to remain much higher than that prevailing prior to 1939. The comparative income tax burdens for selected years are portrayed in the following table:

TABLE XL
INCOME TAX AS A PERCENTAGE OF INCOME*

Year	Single Person		Married Person with Two Children
	Income	Tax as a Percentage of Income†	Tax as a Percentage of Income†
1938	\$ 2,000	2.0	0.0
	4,000	4.5	1.5
	10,000	9.0	6.0
	30,000	24.0	22.0
1942	2,000	22.0	5.0
	4,000	32.0	16.5
	10,000	43.0	33.0
	30,000	61.0	57.0
1947	2,000	11.0	0.0
	4,000	15.5	7.0
	10,000	22.5	18.0
	30,000	39.0	37.0

*Source: Bank of Canada, *Statistical Summary*, Apr.-May, 1947, p. 43.

†Approximate percentage.

Advantages of an Income Tax.—The outstanding argument for income taxation is that it can be made to square readily with the ability principle. As compared with commodity taxes which tend to shift to the consumer and fall heavily upon the poor, income taxes for the most part lie permanently where they are placed and the

burden can be arranged to fall largely upon the upper ranges of incomes. The practice of allowing special exemptions to persons with dependents, as well as that of exempting small incomes, supplements the principle of progressive rates in achieving an approach to the ability ideal.

Secondly, income taxation can be scientifically administered. The incidence is plain and, therefore, its effects easy to discern. The contributor is conscious of his part in sustaining government. While it is often argued that it is an advantage to have the people paying taxes without their knowing it to prevent them from "squawking," it is probably better political philosophy to have the citizen conscious of his financial relations with the government. Under the latter condition the government is more liable to be held to a strict accountability and the citizen educated toward a healthy public interest. Historically, political corruption and spoils and wrong attitudes of the people toward the purpose of government have frequently been associated with the blind yield of systems of indirect taxation.

Thirdly, income taxation lends itself to distinguishing between earned and unearned income. The latter is usually taxed at a higher rate.¹³ The efficient utilization of this principle involves a knowledge on the government's part as to the taxpayer's sources of income, otherwise a considerable amount of evasion is likely to occur. For years the British have adopted the method of collecting the tax at the sources from which income springs, whether these be wages, rent, interest, or profits. The trouble with "stop-page at the source" is that it weakens the possibilities of progressiveness which requires knowledge of the individual's *total* income. The scheme necessitates rebates in cases where the total income is below the exemption plus other allowances level.

For several years Canada has adopted the principle of "information at the source." That is, employers furnish the government with data respecting payments of salaries and wages. Corporations are now required to give similar information as to dividends paid to stockholders. Furthermore, since 1942, a portion of wages and salaries payable to individuals is withheld by employers and turned over to the government as tax revenue. This "pay-as-you-go" policy results in collecting the tax substantially during the year in which income is earned and, on the average, about ten months

¹³Canada imposes a surtax of 4 per cent on investment income in excess of \$1,800.

prior to the actual filing of the income tax return by the taxpayer. This "information at the source" and "pay-as-you-go" system enables the Dominion government to make a fairly accurate distinction between earned and unearned income.

Finally, it may be said that income taxation answers well the other requirements of a good tax. It is economical, yielding the treasury most of what is taken from the people. It is elastic inasmuch as rates can be changed and exemptions lowered or increased. It is convenient, lending itself to payment in instalments. Its certainty is not so satisfactory perhaps, the amount varying somewhat with the business cycle.

Disadvantages and Criticisms.—It has been suggested that income taxation may be made to conform closely to ability and being possessed of most of the marks of a good tax might very well be used exclusively, all other taxes being struck off. Certain weaknesses suggest themselves at once, however, in this arrangement. In the first place, it would leave many people in the position of making no contribution whatever to government. In the second place, income is not a well-defined term and probably any way in which it might be interpreted could not lead to complete fairness. What, for instance, is the income of the farmer who lives in part upon the products of his farm and how shall he be compared for taxation purposes with the city office man who must buy everything out of his salary? What is the income of a real estate holder whose property is increasing in value though it may be yielding no money income at all?

A further problem very different of solution is to determine how steep the rate of progression should be. A complete application of the ability principle would probably require the taking of the greater part of all incomes in excess of \$50,000 and very little from those below \$5,000. But would such an arrangement be feasible? Experience seems to indicate that very high rates against the upper ranges of income fail to achieve the results desired. Mainly, they cause tax evasion, through turning the source of income into non-taxable uses. Revenue does not rise in proportion with the severity of rates. Furthermore, they may drive capital out of the country or interfere with its further accumulation. The rates can be so high in the upper brackets as to destroy incentive not only to save but also to work. This is a fine point for the authorities to determine in the interests of the entire economy.

Corporate Income Tax.—Canada imposes (1947) an income

tax on corporations at a flat rate of 30 per cent of net income. As will be seen by referring to Table XXXVII, the combined yields from the corporate income and excess profits tax approximate that of the personal income tax since 1942. Prior to the war the returns from corporation income tax alone was greater than revenue from the tax on personal incomes. The tax rates on excess profits were raised sharply to help finance the war. In 1941 a regulation was passed whereby corporations having profits exceeding $116 \frac{2}{3}$ of their standard profits (1936-9 average) paid a tax at the rate of 100 per cent on this excess. No corporation was allowed to retain, after tax, profits equal to more than 70 per cent of its standard profits. Provision was made, however, for a 20 per cent refund after the war for corporations to which the 100 per cent tax applied. The excess profits tax was eliminated January 1, 1948.

Succession Duties.—Succession duties, or inheritance taxes, may be imposed in either of two ways: first, they may be imposed upon the right of the deceased to transmit property, and so fall upon the net estate as a unit. This is the method of the federal inheritance tax in the United States. Second, they may be imposed upon the right of the heirs to receive property and so fall upon the shares distributed to the heirs. This is the way with most of the state taxes in that country. Taxing the distributive shares is usually considered the more equitable method since it can take into account the amount coming to each and, if desired, can arrange the rate of progressiveness accordingly. It can also distinguish between direct and indirect heirs. Taxing the whole estate regardless of how and to whom it is distributed is, on the other hand, simpler from the standpoint of administration and likely to yield more for the government. Succession duties in Canada are arranged to combine all three factors.

The succession duties of both Dominion and provincial governments are of such an order that the tax rate varies with the size of the estate, the amount of the legacy, and the class of beneficiary. According to federal regulations, no duty is payable on estates not exceeding \$5,000 or on bequests up to \$1,000 to any one individual. There is a lack of uniformity among the provinces in regard to exemptions and tax rates. The Dominion government recognizes four classes of beneficiaries. Here again, there is no uniformity among the provinces, some having three classes, others four.

Prior to 1941, succession duties were left exclusively to the

provinces. In that year, however, the Dominion government entered the estate duty field. As will be seen by comparing Tables xxxvii and xxxviii, the yield to the federal government from this source in 1946 was about \$11 million less than that to the nine provinces.

Inheritance taxation may be defended on the ground that wealth so acquired by the heirs has usually not been largely earned by them. Moreover since such income yielding wealth is often an addition to what they have been accustomed to and since generous exemptions are allowed, it does not offend the ability principle. It is doubtful, on the other hand, if it is a particularly economical form of taxation. It involves a considerable amount of legal fees in collection and, if we may judge from recent behaviour in Canada, rich men use a lot of their energies in trying to arrange their affairs so as to evade it. Mostly men do not stop producing wealth entirely on account of such a tax but they seek to give it away or to take residence elsewhere to escape the result. It is a form of taxation which, more than any other, appeals to social reformers as a means to the redistribution of wealth, for by breaking up the great fortunes they hope to preserve a more democratic diffusion of ownership. Conversely, we hear considerable criticism nowadays of the energetic administration of succession duties and particularly of the application of the tax to gifts directed toward educational institutions as drying up the sources of generous giving which have been associated with the passing of great estates.

Canadian Tax System Evaluated.—It is impossible to evaluate a tax system in any complete sense without analysing it in relation to specific expenditures. The force of this statement will be evident especially as one recalls the benefit principle of taxation. Gasolene taxes and motor car licences, for instance, collected to the point of paying half the costs of building highways, might well be endorsed when devoted chiefly to that purpose, whereas equal gasolene and motor car collections might be condemned if the use of cars and gasolene did not make highway expenditures necessary. We may not, however, pursue this line of thought too far. We must confine our examination to an appraisal chiefly in terms of the other principles described above.

Roughly, we may group taxes into three categories, viz. income (including inheritance), commodity and property taxes. We need to recall that the first of these, in the main, does not shift. Commodity taxes, on the other hand, mostly do shift. They may be

treated as consumption taxes. Property taxes again either do not shift or, where they do, they shift slowly. They are a tax on land-owners, house-owners and (after the shift) payers of house rentals. With this classification in mind we shall examine the nature of the tax burden in our three types of government.

Although commodity taxes are present in the fiscal system of our Dominion government, there is ample evidence to show that during the past four decades the trend has been away from regressive taxation.¹⁴ This will be clear from an examination of Table xxxvii. In 1900 customs and excise levies furnished 100 per cent of current revenue from taxation. In 1946 the combined yields of customs, excise, and sales taxes accounted for slightly more than 35 per cent of tax revenue, whereas income taxes (including excess profits tax on corporations) and succession duties yielded approximately 61 per cent. In 1936 the percentage from income taxes was 25.

A similar movement is evident in the provincial field. The introduction of the income taxes and, in lieu of these, federal subsidies (funds for which were derived largely from progressive taxation) has lessened the regressive burden. Provincial taxation with its emphasis upon inheritances, corporations, use of motor cars, and revenues from resources, probably represents the best balance when considered by itself of any of the governmental divisions, although fiscal adequacy seems to be lacking in several provinces.

Only in the municipal field is tax reform overdue. The real estate tax, which is a survival of the outmoded general property tax, violates the concept of equality in taxation. In a simpler form of society when the bulk of incomes was derived more or less directly from property owning, e.g. farms, stores, and mills, the real estate tax could be justified. But in modern times this tax tends to place unequal burdens on the taxpayers for the following reasons. In the first place, real estate ownership is an unsatisfactory index of ability to pay taxes. The popcorn vendor may own little or no real estate and yet have a substantial income. In the second place, despite the skill and honesty of assessors, the assessed valuations of real estate tend to be arbitrary. In the third place, the tax is inelastic. The yield from real estate taxes does not, in fact can not, respond readily to fiscal needs. For this,

¹⁴See D. C. MacGregor, "Tendencies in Canadian Public Finance" (*Annals of the American Academy of Political and Social Science*, Sept., 1947).

under certain circumstances, the real estate owner may be duly thankful. During a business depression the labourer home-owner may find himself on part time, or even out of work. If the municipal authorities raise the rates, the labourer in question will be paying higher taxes to finance relief for himself and his family. Even if the rates are not increased, the fall in income augments the burden of the real estate tax. No wonder "tax sales" increase during a depression. It is also contended that real property taxes discourage improvements. In any case, on the principle of ability to pay, nobody can defend successfully a fiscal system which derives approximately 75 per cent of its revenue from taxes on real estate.

CHAPTER XXXII

PUBLIC DEBTS AND FISCAL POLICY

THE great growth in public expenditures in modern times has exceeded the rise in government revenues. This has resulted in a rapid increase in public debt. The data presented in Table XLI indicate the failure of our federal government's revenue to keep pace with expanding expenditures in recent years:

TABLE XLI

TOTAL EXPENDITURES AND REVENUE OF DOMINION GOVERNMENT
FOR SELECTED YEARS*
(In millions of dollars)

Year	Total Expenditures	Total Revenue	Total Revenue as a Percentage of Expenditure
	\$	\$	%
1936	532.6	372.6	69.96
1938	534.4	516.7	96.68
1941	1,250.0	872.2	69.80
1943	4,387.1	2,249.5	51.27
1945	5,245.6	2,687.3	51.23
1946	5,136.2	3,013.2	58.67

*Source: Dominion Bureau of Statistics, *Canada Year Book*, 1947, p. 962.

From a study of the above table, it is clear that the Dominion government almost succeeded in balancing its budget in 1938, but expenditures greatly exceeded revenue in subsequent years. Generally speaking, during the war years, revenue was approximately half expenditures. In view of the volume of spending this meant large and rapid additions to the public debt. That the phenomenon of a spectacular rise in government debt is not confined to Canada can be seen by reference to Table XLII.

The gap between expenditures and revenue has been filled by government borrowing, a method of financing to which public authorities have resorted extensively in recent years. This is not

out of line with conditions in private industry where, as we have seen, most large-scale enterprises make use of funds derived from many sources through corporate financing machinery. Governments even more than corporations borrow through the sale of securities. They do not, of course, sell shares of stock but are limited to credit securities of various kinds, long-term bonds, short-term treasury bills and certificates, and sometimes (referring mostly to national governments today) issues of paper money, i.e. non-interest bearing debt. The basis for confidence in government securities is the taxing power of the state rather than dependence on the earning strength of any one enterprise.

The Machinery of Public Borrowing.—Public loans have been classified into three types, viz. those for long-term projects, short-term, and emergency loans.

Long-term borrowing, looked upon as normal in an economy producing relatively permanent artefacts, is financed through the use of long-term bonds. They make it possible to distribute the costs of undertakings, whose benefits are lasting, over a period of time. They are satisfactory also from another standpoint, viz. that they are less disturbing to business than heavy taxes laid at the time of extra construction activity by government. Through them public finance accounts are dotted from time to time with "capital outlay" items though the interest on them and the other debt servicing charges are carried in current ("consolidated fund") account. Long-term securities are usually arranged to mature at various times across the period of years, paralleling in some degree the utilization of the goods against which they have been issued. In other cases sinking funds are arranged against the day when a large issue shall fall due. By the process of amortization it is calculated what funds are necessary from time to time to take care of the interest and principle in a manner convenient to the government. European governments have a custom of issuing bonds without any maturity, it being a matter for the government itself to call them in and retire them at its convenience. This practice has not been adopted on this continent. Generally speaking, the wisest method of financing is through the use of serial bonds. In this way governments are stimulated to make provision for retiring the proper amounts from time to time as per original plan. The sinking fund method is more subject to corruption and abuse. The presence of large sinking funds involves the danger of their poor investment. Especially unwise

has been the investment of the sinking funds of some of our countries and smaller government units.

Short-term borrowing, or temporary financing, refers to the issuing and sale of treasury notes or bills maturing usually in periods of six months or less. They are used to anticipate taxes that are slow in coming in or to meet situations where expenditures have been heavier than budget expectations. Sometimes with terms somewhat longer than those just cited they are used to postpone the issue of long-term bonds in the hope that the market for the sale of the latter will become more favourable. Generally speaking they make the conditions of borrowing more controllable for governments and enable them to finance at lower cost.

Emergency financing refers to the handling of unexpected situations calling for great expenditures. Examples of this are found in conditions of war, destructive earthquakes, or other forms of national disaster. The outstanding illustrations in recent years have been (1) meeting the conditions of unemployment resulting from the great depression and (2) financing World War II. As intimated elsewhere in these pages, scientific procedure looks to planning in advance for future depressions, such plans to include financial arrangements as well as laying out works programmes. This suggests the removal of depression financing from the category "emergency." The plans which governments have made and are making to forestall the anticipated postwar depression can scarcely be regarded as steps to combat an unforeseen event.

It is difficult to lay down general rules for financing emergencies. Much depends on the nature and expected duration of the emergency. For the most part taxation is too slow to meet the situation and borrowing is necessary. It may be feasible, moreover, not to increase taxation at all at the time and to meet the whole situation with borrowed funds. Usually it is better, however, where the condition is likely to be at all lasting, to support loans with heavier taxes and to provide for the retirement of the bonds as budgetary considerations will permit. It is a mistake furthermore to assume that the costs of war, depression, or other calamity can be loaded entirely on future generations simply through the device of borrowing. This might in some measure be accomplished by means of loans contracted abroad but certainly not on a basis of home borrowing. The true loss is in the destruction of wealth, or, in the case of a depression, in the non-creation of wealth due to the failure to put resources to use in producing it. This condition of

lack throws its shadow on the people of today as well as upon those of the future.¹ Borrowing may alleviate the situation by a better distribution of the wealth that exists. It does not of itself make good the lack of the wealth that is non-existent.

Extent and Growth of Public Borrowing.—The extent of borrowing and the rate of increase are indeed challenging, as will appear from the following table:

TABLE XLII
GROWTH OF INDEBTEDNESS OF MODERN GOVERNMENTS*
(In millions of dollars)

Year	Great Britain	United States (Gross Federal)	U.S. Debt as a Percentage of National Income	Canada (Gross Federal)	Canadian Debt as a Percentage of National Income	Canadian Provinces (Bonded Debt)	Canadian Municipalities (Bonded Debt)
	£	\$	%	\$	%	\$	\$
1914	678	968		544		218 (1916)	
1920	7,879	24,061		3,042		349	776
1923	8,000†	22,350	34.6	2,889		638	971
1930	7,596	16,185	21.3	2,545		919	1,271
1934	8,018	27,063	58.9	3,141		1,330	1,453
1938	8,320	37,165	54.7	3,540	68.9	1,636	1,435
1945	21,509	258,682	160.8	15,712	135.3	1,641	(‡)
1946	24,279	269,422	166.8	18,959	164.1	1,672	(‡)

*Sources: *Whitaker's Almanac*; *U.S. Statistical Abstract*; *Canada Year Book*; and Bank of Canada, *Statistical Summary*.

†Approximate figure.

(‡) Quebec figures were not available.

Only a glance at Table XLII will be necessary to appreciate the great increase in the debts of the national government resulting from war. It is equally plain, in view of the changing value of the dollar, that there was little change in provincial government debt during World War I. The decade of the twenties on the other hand, while it witnessed a reduction in national debts in all three Anglo-Saxon countries, saw the provincial debts of Canada nearly triple, and the Canadian municipalities increase by 75 per cent. This rise in provincial and municipal debt reflects the increase in expenditures incurred with reference to expanding demand for educational facilities, roads, and other public works and more extensive social services.

¹E. R. A. Seligman, *Essays in Taxation* (ed. 9, New York, 1923), pp. 715 ff.

The depression of the 1930's revived the tendency to a general increase in public debts, amounting to approximately 40 per cent for the Canadian federal government, 75 per cent for the provinces, and 14 per cent for municipalities. Within this period the federal debt of the United States rose by approximately 130 per cent. The most startling increase in national debt occurred during World War II. The British debt approximately tripled, the American rose about 600 per cent, and the Canadian 440 per cent. In the United States and Canada the federal debt is over 160 per cent of the national income. The significance of this astounding phenomenon will be considered in a later section.

The rise of provincial and municipal debt during the 1920's, as we have seen, indicates that all public debt increase is not attributable to wars and depressions. It suggests the complexity of the whole question of increasing public debts, which the popular mind is likely to overlook. It suggests, too, the need of patient analysis in terms of assets and liabilities, satisfactions and costs, and the extent of increase in patrimony as a result of expenditures, before indulging in hasty wholesale condemnation or approval of debt increase in the case of any province, city, or nation. During World War II, provincial and municipal debt in Canada remained practically constant. Provinces and municipalities held their commitments to a minimum in order to facilitate the Dominion government's war financing. Now that the conflict is over, are we going to witness a revival of provincial and municipal debt expansion? If so, let us hope that the movement will not be initiated without careful consideration of the issues involved. The key to public debt expansion is public expenditures. The most effective guarantee against improvident expenditure, hence against undesirable debt increase, is to spread the tax burden in such a way that everyone will realize that he has a share in "footing the bill."

Views Regarding Public Debts.—Broadly speaking there are two schools of thought regarding public debts, the traditional and the modern. The first holds that a large public debt is undesirable as it necessitates a heavy tax burden and may impair the financial structure of the country. According to this approach, a huge debt may lead to difficulties in collecting a sufficient amount of revenue to pay the large interest charges. In such circumstances the government is under strong incentive to print paper money to meet its obligations. This tends to have an inflationary effect

and the entire financial system of the nation may be weakened, or even, as in the case of Germany after 1914, destroyed. Except in times of emergency, adherents of the traditional view advocate sufficient taxation to balance the budget. In fact they advocate financing for a budget surplus which should be used to reduce the national debt to manageable proportions. They do not suggest that the debt be entirely wiped out, but insist that a small debt involving a low and comparatively stable tax burden would engender confidence and thus tend to stimulate economic activity.

On the other hand, the modern school, which appears to have originated from a Keynesian background in the 1930's, regards the public debt somewhat in the light of a national blessing. Its supporters contend that so long as the debt is held internally there is no danger to the economy, because funds collected in taxes are paid out again as interest and, therefore, do not reduce incomes in general. The bonds issued by the government are desired as investments by both individuals and banks. The former want them on account of the safety factor and the latter because a backlog of government securities not only yields an income but enables the banks to lend more freely to more venturesome enterprises. Adherents of this school claim that large public investment, hence an expansion in public debt, will be necessary in the future because the opportunities for private investment are not keeping pace with the growth of savings. The government will have to step in and lap up the excess savings by issuing bonds and proceed to invest the funds thus secured. We should observe that all this ties in with the mature economy doctrine, against which serious objections can be raised. Furthermore it can be seen that the members of this school not only condone a large existing public debt but even advocate an expanding debt as insurance against a business recession. These opposing views will be evaluated in the section on fiscal policy.

Let us now turn to certain factors pertaining to public debts concerning which there are many popular misconceptions. In the first place, it should be clearly understood that a public debt if held internally is not analogous to a private debt. When an individual borrows, a claim against his assets has been created. When a government borrows from its own people, no net claim against the *nation* has evolved. If, however, the government borrows from foreigners, a claim against the nation does result. This case is similar to that of private borrowing. But the mere

fact that the government borrows from its own citizens does not mean that the debt is of no significance. Much, but not everything, depends on the size of the debt, the purposes for which it was created and who holds it.

In the second place, it is commonly assumed that by borrowing a government shifts the costs, e.g. of a war or major depression, from present to future generations. If the debt is internally held, there is no such shifting. When our federal government borrows to defray war costs, Canadians buy bonds, thus turning over money to the government. When the loans are repaid, the Dominion government collects taxes from Canadians and pays out the proceeds to Canadians who bought the bonds. So far as the nation as a whole is concerned, there has been no "shifting of the burden" to the future. There may be a redistribution of wealth. This depends on the taxation system. But if the Dominion government borrowed from people in another country, e.g. the United States, Canadians for the time being have given up nothing (they can spend as freely as before for consumption purposes). When the loan is repaid, however, Canadians as a whole will have to export an extra quantity of goods in order to meet their foreign obligations. In this case, of course, the burden was passed on to those bearing the tax load when the foreign loan was liquidated.

In this connection it should be observed that, irrespective of whether the government finances a war (or depression) by taxation or internal borrowing, the *real costs are borne by the people living at the time* who supply the government with funds. A war raging from 1939 to 1945 could not be fought with guns, tanks, ships, and planes built in 1960. The people living in the period 1939-45 had to give up, either voluntarily or through compulsion, materials in order that the armed forces might be equipped and sustained. No amount of financial manipulation could alter that fundamental fact. Nevertheless, the growth of public debts during a war or depression results in a financial aftermath which can not be ignored. The problem in this connection is frequently called the public debt.

Effects of Public Borrowing.—One effect of government borrowing (assuming loans are floated at home) is to divide the people roughly into two groups—the one consisting of taxpayers and including all of us, paying over interest and redemption money thereafter, the other smaller group receiving large portions of the money so paid as interest or maturing principal for the bonds they hold. This is

our position at the present time. Our federal debt is largely held by Canadians who receive the greater part of the \$400 million for interest account which is paid out of current revenue. All the opposing attitudes characteristic of debtor and creditor classes find expression in these two groups.

Large use of government borrowing probably stimulates extravagance in consumption. Countries that meet most of their expenditures as they go are conscious of the weight of taxation and are less likely to spend publicly more than they can afford. Peoples that are borrowing lavishly may be only partially conscious of their extravagance especially where they are hoodwinked by scheming politicians. The familiar example of colossal extravagance made possible largely through borrowing is that of public relief during the past decade. Similarly ease in borrowing with no final accounting insisted on undoubtedly contributes to extravagance in production.

Public borrowing if wisely done will enable a fuller use of resources. It is plain that national development should not wait entirely upon taxation, especially in young countries. For industries favourable to government operation credit placed in government hands is as vital for their expansion as is credit placed at the disposal of private enterprisers in other industries. Public borrowing if poorly handled may, on the contrary, make a very poor use of resources as witness again the low exertion and poor direction of the thousands of men recruited from the unemployed to work on government projects.

Public loans again if heavily indulged in may deprive private industry of loan capital. Governments are at last becoming aware of their responsibilities to private enterprisers and, working with central banks, they seek to control the conditions of the money market in a way favourable to the healthy working of the whole economy. Yet during the middle thirties government securities came to dominate the whole financial structure in a way quite unprecedented. They predominate not only in the assets of insurance companies but have forged into first place in the holdings of loan associations and trust companies; they are sharing that honour with commercial loans in the assets of our commercial banks; they are prominent on the balance sheets also of many of our industrial corporations. While we admit that they provide desirable investments for those who are interested in safety at low rates, we are forced to observe that the former channels of credit in a functioning capitalist economy are badly choked. Credit, if it is to do its per-

fect work, should be passing largely into the hands of those who are directing industry and trade. It should be put to productive use. It should, therefore, either come back into the hands of industrial leaders or government should turn it more boldly into publicly directed production. In recent years credit has served too largely a purely distributive function.

Lastly, government borrowing, when not operated in a responsible manner, may lead to repudiation. Governments, it should be added, may repudiate without being sued. Repudiation is bad from every standpoint. It ruins the future borrowing power of the government as well as weakening confidence in the securities of sister governments. While it sets free the taxpayer from meeting the immediate obligation, it brings disaster to the various persons and institutions who hold its bonds as assets. Above all it plays havoc with the sanctity of contract which we have stated in an early chapter constitutes the very framework of our interdependent society.

The "Burden" of the National Debt.—Although the burden of the public debt may be regarded from several viewpoints (e.g. total or per capita debt and total or per capita interest payments on the debt), the most satisfactory concept involves interest payments as a percentage of national income. There are, strictly speaking, other costs incident to servicing the debt which should be added to interest payments in determining the "burden." Examples of these are bookkeeping expenses and the handling charges—not to mention adequate compensation to members of Parliament for time utilized in discussing the subject on the floor of the House. But it is difficult to obtain accurate accounting data on such items, hence we fall back upon the annual interest in relation to the national income as the chief index of the debt burden. This and other significant items are set forth in Table XLIII.

The figures presented in Table XLIII bring out several interesting facts, some of which we have already noted. Here we see in bold relief the astounding growth in total and per capita debt. The latter has increased 4,600 per cent since Confederation and over 2,000 per cent since the beginning of the century, much of this during and after World War I. The experience of the United States in recent times has been even more spectacular than Canada's. The American federal debt per capita rose from \$13 in 1912 to \$1,852 in 1945.² This rate of rise in public debt is some-

²The Tax Foundation, *Facts and Figures on Government Finance* (New York, 1947), p. 114.

TABLE XLIII

SUMMARY OF THE PUBLIC DEBT OF CANADA AND INTEREST PAYMENTS THEREON, SELECTED YEARS, 1867-1946*

Year	Gross Debt (000,000)	Active Assets (000,000)	Net Debt (000,000)	Net Debt per Capita	Gross Debt as a Per- centage of National Income†	Net Debt as a Per- centage of National Income†	Interest Paid on Debt (000,000)	Interest Paid as a Percentage of National Income†	Interest Paid per Capita
	\$	\$	\$	\$	%	%	\$	%	\$
1867	93.0	17.3	75.7	22.73					1.47
1871	115.5	37.8	77.7	22.09			5.2		1.75
1881	199.9	44.5	155.4	35.82			7.6		1.98
1891	289.9	52.1	237.8	49.09			9.6		2.00
1901	354.7	86.3	268.4	49.69			10.8		1.74
1911	474.9	134.9	340.0	47.18			12.5		1.74
1921	2,902.5	561.6	2,340.9	266.37	78.3	63.2	139.6	3.8	16.88
1931	2,610.3	348.7	2,261.6	217.97	64.3	55.7	121.3	3.0	11.69
1938	3,540.2	438.6	3,101.6	278.13	68.9	60.3	132.1	2.6	11.85
1941	5,018.9	1,370.2	3,648.7	317.08	59.7	43.4	139.2	1.7	12.10
1943	9,228.3	3,045.4	6,182.8	523.44	82.1	54.9	188.6	1.7	15.96
1945	15,712.2	4,413.8	11,298.4	932.29	135.3	97.3	319.0	2.8	26.32
1946	18,959.8	5,538.4	13,421.4	1,090.6	164.1	115.6	409.1	3.6	33.24

*Source: Dominion Bureau of Statistics, *Canada Year Book*, 1946, p. 903, and 1947, p. 972.

†Gross National Product.

thing new in the experience of modern nations. The interest paid, Table XLIII, is also worthy of note. Total interest on Canadian federal debt rose from \$5.2 million in 1871 to \$409 million in 1946, the per capita charge rising from \$1.47 to \$33.24 for the years indicated. But, as already inferred, such facts, while significant, do not give a very clear picture of the impact of the debt load upon the national economy.

From an accounting viewpoint, the public debt burden is a function of three variables: the absolute size of the debt, the rate of interest, and the size of the national income. During the recent war, although the debt expanded rapidly, the national income also increased. This latter increase in itself helped the Canadian people to pay the taxes necessary to service the debt. Furthermore, in contrast to experience in World War I, the interest rate was not only low when the second world conflict began, but actually declined during the struggle. This is shown in Table XLIV.

TABLE XLIV

AVERAGE RATE OF INTEREST PAYABLE ON DOMINION GOVERNMENT
DEBT AS AT MARCH 31 FOR SELECTED YEARS*

Year	Interest Rate	Year	Interest Rate
1914.....	3.487	1939.....	3.528
1916.....	3.908	1941.....	3.123
1918.....	4.733	1943.....	2.656
1920.....	5.134	1945.....	2.547
1922.....	5.164	1946.....	2.634

*Source: Dominion Bureau of Statistics, *Canada Year Book*, 1947, p. 977.

The two factors, expanding national income and falling interest rates, enabled the Canadian people to carry the annual interest charge on the increasing public debt without much difficulty. As indicated in Table XLIII, interest paid as a percentage of national income³ actually fell from 2.6 in 1938 to 1.7 in 1941 and 1943. Thereafter it showed a tendency to rise, being 3.6 in 1946. So long as the national income continues to be high and interest rates remain low, the national debt can be carried without any undue strain on the Canadian economy. If, however, a depression occurs, which would be accompanied by a fall in the national income, and

³National income figures for 1921 and 1931 are being revised. In all probability the revision will be upward. If so, the percentages shown for these two years in the last column of Table XLIII would be somewhat smaller.

if interest rates should increase, the percentage of the national income required to service the debt would rise. This would necessitate higher taxation, if the debt is to be kept from rising, and the government might find servicing the public debt a very difficult problem. Increased taxation for interest payments would take place at a time when government expenditures tend to expand, i.e. depression spending for relief and similar purposes. It is interesting to note in Table XLIV that interest rates in 1946 were slightly higher than in 1945. If this is the beginning of an upward trend the national debt burden will increase, unless, of course, the debt is contracted or national income expanded. The whole problem of public debts has an important bearing on the question of fiscal policy. To this topic we now turn our attention.

FISCAL POLICY

In recent years the expression "fiscal policy" has become prominent in economic circles. In general the term refers to the intention of the national government to keep the economic machinery of the country operating at a high degree of efficiency. Broadly speaking the aim is to promote and maintain a condition of full employment and at the same time avoid inflation. This is to be accomplished chiefly by an appropriate spending, taxation, and borrowing programme on the part of the government. Authorities on the subject point out that in so far as fiscal policy is concerned with the sum total of economic conditions, public expenditures "ought to be weighed not in terms of profit and loss of the state itself, but rather in terms of the effect of such expenditures on the full and efficient functioning of the economy as a whole."⁴ At times, the budget should be balanced, but deficit financing (an excess of expenditure over revenue) is, on other occasions, an important aspect of fiscal policy.

Viewed comprehensively, the means employed in fiscal policy are not simple. They include not only public expenditures, taxation, and borrowing, but also employment generating programmes and management of the public debt. Furthermore, the fiscal policy of the government must be supplemented by an appropriate monetary policy on the part of the banking system. For instance, when the government decides to borrow money, the banking authorities should keep the interest rate low and thus

⁴Alvin H. Hansen, *Fiscal Policy and Business Cycles* (New York, 1941), p. 187.

facilitate the government's acquisition of funds from lenders. Since the government's task is to maintain full employment, it must keep purchasing power in balance with production, preventing the volume of money from falling so low as to result in deflation or from rising so high as to produce inflation. This involves a very wide and harmonious use of fiscal and monetary powers. War-time inflationary borrowing and spending must be counteracted by deflationary taxation if the economy is to remain in equilibrium. Similarly a reduction in government spending might necessitate an easing of the tax burden. Since fiscal policy is designed to maintain stability of purchasing power relative to the flow of goods and services, it should be used to combat either inflation or deflation.

The degree of employment and the level of prices is determined largely by the total demand for commodities. Total demand is the amount of goods and services which individuals, business concerns, and governments are both *able* and *willing* to buy. A large amount of purchasing power outstanding is not a guarantee that commodities will be bought. There must be a willingness on the part of those who possess the money to spend it on consumer and investment goods. Various influences may cause individuals or business executives either to increase or decrease their expenditures. Yet, if full employment is to prevail, a reasonable stability of purchasing power flow, i.e. total demand, must be maintained at any given level of population and technical efficiency. From the viewpoint of fiscal policy, this means that the government should increase its expenditures and incur a budget deficit when private outlays diminish. This is known as compensatory spending or deficit financing. Conversely, when private spending is augmented beyond the point necessary to sustain full employment, the government reduces its outlays and possibly experiences a budget surplus.

Government Responsibility for Full Employment.—The assumption of responsibility for maintaining full employment by national governments in capitalistic countries is of comparatively recent origin. The recovery programme in the United States during the 1930's was a step in this direction, but the American government did not commit itself specifically at that time. The Labour Government of Great Britain, of course, is determined to follow a course designed to ensure social security, including the maintenance

of full employment. In this regard, the writings of the late Lord Keynes and Sir William Beveridge have had great influence.

The Dominion Government and Modern Fiscal Policy.—As early as 1945, the Canadian federal government signified its intention of adopting a programme to promote full employment. In that year the minister of reconstruction presented to Parliament a White Paper on Employment and Income.⁵ Although this report had special reference to the initial period of reconstruction, it also pointed to a long-term policy. In the words of the White Paper:

The central task of reconstruction, in the interests of the armed services and civilians alike, must be to accomplish a smooth, orderly transition from the economic conditions of war to those of peace and to maintain a high and stable level of employment and income. The Government adopts this as a primary object of policy. . . .

In setting as its aim a high and stable level of employment and income, the Government is not selecting a lower target than full employment.

The Dominion government proposed to attack the problem by influencing those types of expenditures which loom large as sources of income and employment in the Canadian economy. The first of these sources is *export trade*. In this case, the decision to spend is made outside the country. To restore and develop this type of spending in Canada, the federal government will press for "international arrangements which would permit and encourage the expansion of world trade." It also, through the Commercial Intelligence Service, will try to enlarge Canada's foreign markets. Furthermore, "under the Export Credits Insurance Act, the Government is authorized to extend and guarantee credits to other governments for financing Canadian exports."

The second source of income stressed by the White Paper is *private investment* in plant, equipment, and other durable goods. In this connection: "The Government proposes not only to reduce taxation as rapidly as possible but to develop its fiscal policy so as to encourage the increase of private investment to a high and stable level. It is proposed particularly to eliminate or minimize taxation which contributes to a higher level of production costs." Low interest rates and provision of intermediate credit by the Industrial Development Bank are part of the programme calculated to stimulate private investment.

The third source, *consumption expenditures*, the level of which depends mainly on the level of incomes, is to be effected by benefits

⁵Honourable C. D. Howe presented the White Paper, April 15, 1945.

under (1) the Unemployment Insurance Act, 1940, (2) the Family Allowance Act, 1944, (3) the Pensions Act, and (4) the Agricultural and Fisheries Price Support Acts.

The fourth source of income is *public investment* in useful works, for improving the productiveness of resources and enhancing the welfare and opportunities of the people. In this regard the White Paper states that "the deliberate use of public investment expenditures as a permanent instrument in employment policy has to be undertaken experimentally." The federal government, however, believes in making a "substantial beginning along two lines: (1) the undertaking of advance planning of all necessary and desirable Dominion projects so that there may be available a 'shelf' of soundly planned projects, ready for execution when prospective employment conditions make it desirable to increase public investment expenditures," and (2) "the implementation, in cooperation with the Provinces, of a new Dominion policy of expenditures on the development and conservation of natural resources."

From the above sketch it seems that the Dominion government has a plan to maintain employment and income at a high level as a long-run policy. Regarding this, one prominent American authority on fiscal policy writes: "The Canadian postwar program is a first-class statement of compensatory and developmental fiscal policy. It is the best program that any government has turned out. But it is inadequate with respect to public roads."⁸

As a result of close economic relations with other countries, a fiscal policy for full employment would be difficult to implement in Canada if an economic depression prevailed elsewhere, particularly in the United States. But the American federal government also has placed itself on record as being prepared to take whatever steps may be necessary to insure the efficient utilization of the nation's productive resources. This is expressed in the Employment Act of 1946 as follows: "it is the continuing policy and responsibility of the Federal Government to use all practicable means consistent with its needs and obligations and other essential considerations of national policy . . . to promote maximum employment, production and purchasing power." As a means to achieving this purpose, the Act created a Council of Economic Advisers which advises the President and assists him in preparing an annual economic report for submission to Congress regarding the state of the nation.

⁸Alvin H. Hansen, *Fiscal Policy for Full Employment* (Institute on Postwar Reconstruction, New York University, 1946), p. 11.

Fiscal Policy Inflation and Deflation : Inflationary Measures.—

Fiscal policy of an inflationary nature involves increased government spending, borrowing from the banking system, and a reduction in taxation. As we have seen, securing funds from the commercial banks results in a net addition to the circulating media, and borrowing from the central bank accentuates the possibilities of expanding purchasing power. A lowering of taxes (particularly levies applying to low incomes, those of a regressive nature, and those which tend to discourage the assumption of business risks) leaves extra money in possession of individuals and organizations, thus encouraging additional private investment.

It will be apparent that fiscal policy is an aggregative approach to the problem of keeping the economic machinery functioning at a high degree of efficiency. Through government compensatory action, the sum-total of purchasing power is to be maintained at a volume which will forestall business fluctuations. While the aggregative approach is basic to fiscal policy as here defined, it is also true that the means whereby compensatory action is taken differ considerably in their effects. For instance, if private spending shows a tendency to decline, the government may make a counter move by *either* increasing expenditures and keeping tax rates the same *or* maintain expenditures at the same level and decrease taxes (it can, of course, use a combination of the two). In either case, the government will incur a deficit. It is deficit financing but the effect on incomes and employment may differ in degree.

If the government increases expenditures and keeps tax rates unaltered, there is a definite increase in spending equal in size to the amount of the deficit. If expenditures are kept constant and taxes reduced, the most the government can hope for is that the entire reduction in tax receipts (the reduction in tax receipts would equal the "deficit" provided the budget had been previously balanced) will be spent. But there is no reason to believe that this will happen. Individuals may save at least part of the extra money left in their hands as a result of lower taxes. In other words, the first alternative guarantees that the addition to spending and incomes will be equal to the deficit, but the second gives no such assurance.⁷ Much, of course, depends on the kind of taxes

⁷See R. A. Musgrave, "Fiscal Policy, Stability, and Full Employment" (in *Public Finance and Full Employment*, Board of Governors of the Federal Reserve System, Washington, 1947).

reduced. If reduction occurred in regressive taxes (e.g. sales tax on necessities) the increase in private spending might approximate the budget deficit; if in middle brackets of the income tax, the result might be otherwise.

The types of government spending also may differ in their effects. Expenditures on public works which are a direct increase in public demand might, though not necessarily, augment spending more than outlays which merely add to the purchasing power of income recipients (e.g. pensions and relief payments). It would seem, at least, that the increase in public demand would act more quickly than adding to the buying power of income recipients. If, however, increased public expenditures are placed in the hands of low-income groups, whose propensity to consume is high, there is a presumption in favour of increased expenditure being equal to the budget deficit.

Deflationary Measures.—The deflationary weapons of fiscal policy are, of course, the opposite of those tending to inflation. In brief they are: reduced government spending; reduction of purchasing power in the hands of the public through borrowing from individuals, retirement of bank-held government debt, and increased taxation. With reference to the last mentioned, it is interesting to observe that the levies which should be raised in order to get quick results are regressive taxes, those which apply to low-bracket incomes, or those which discourage investment. So far as regressive and low-bracket income taxes are concerned, it has been pointed out that fiscal policy may not square with the concept of justice in taxation on the basis of ability to pay.⁸ A rise in the sales or low-bracket income tax might be desirable from the viewpoint of fiscal policy but it would tend to greater inequality in the tax burden. Fiscal policy supporters, however, stress the use of the income tax over a wide range. If strong anti-inflationary measures are essential to meet the situation, the government should use the extra funds collected (budget surplus) to retire bank-held public debt.

Fiscal Policy and the Public Debt.—Since a fiscal policy to fight deflation involves deficit financing, public debts loom large in the overall programme. If government expenditures exceed receipts for a protracted period, the question of debt burden becomes important. This topic was discussed in previous pages, but the tendency of the debt to grow as a full employment policy

⁸Simeon E. Leland, "Comments" in *Public Finance and Full Employment*.

is being pursued necessitates further reference to it here. Some writers on fiscal policy see little or no danger in a growing debt.⁹ Others feel that, while there is no immediate danger, there is a limit to the size of a manageable national debt. It has been suggested, but not stated definitely, that a debt twice the size of the national income is within the realm of safety.¹⁰ In this connection, it is interesting to observe that in 1946 the gross national debt of Canada was 164 per cent of the national income. The ratio of debt to national income in the United States that year was approximately the same (see Table XLIII, p. 671).

The authors do not see any particular virtue in a debt limit twice the size of the national income. The safe limits of the public debt cannot be judged solely by comparing the size of the debt with that of the national income. The quality of the debt is important. Debt incurred for the purpose of constructing facilities of a self liquidating nature might be much greater than that resulting from waging war and supplying relief before the danger point would be reached. The lower the social security payments and similar outlays, the higher might be the ratio of debt to national income, and *vice versa*.

The purpose for which the debt was incurred also has an important bearing on the contention that government expenditures involving debt increases give rise to a net interest burden less than the gross amount of interest paid. It is true that the people who receive interest at the same time may be taxpayers. It is also true that government expenditures are "income generating"—at least in the first instance. But, taking the country as a whole, expenditures on self-liquidating projects leave the people in a better position to pay taxes than similar outlays on relief. In brief, a mere increase in expenditures and size of the debt does not entail a corresponding growth in taxable capacity.

Public Debt and Inflation.—The existence of a large public debt is a potential inflationary force which might become active at the wrong time, i.e. when the government should be trying to combat rising prices. Individuals who own government securities consider them "as good as cash." The bonds can be sold readily in the security market. Hence a large backlog of privately held government debt plus the "spending psychology" constitutes a latent inflationary threat.

⁹See E. D. Domar, "The Burden of the Debt and the National Income" (*American Economic Review*, Dec., 1944, pp. 798-829).

¹⁰Alvin H. Hansen, *Fiscal Policy and Business Cycles*, p. 136.

It may be argued that the selling of huge blocks of government bonds would lower their price drastically and therefore owners would refrain from disposing of their holdings on a large scale. This argument is of doubtful validity. Under pressure of heavy selling it is unlikely that the government would permit a drastic fall in the value of its outstanding securities. Rather, through its agent, the central bank, it would support the bond market. One reason for this is the fact that the commercial banks hold a large portion of the public debt. A marked decline in the price of government bonds would mean a significant reduction in the value of the banks' assets, which might become embarrassing.

Furthermore, the support which the central bank must give to the government bond market results in a weakening of its control over the volume of purchasing power outstanding. If, in order to combat inflation, the central bank authorities raised the interest rate (which would mean a decline in the price of government bonds, except those about to mature), they would cause a fall in the value of commercial bank assets. The monetary authorities find themselves in a dilemma. Hence the existence of a large public debt in the hands of the commercial banks restricts the central bank's freedom to control the volume of credit to fight inflation.

Fiscal Policy and the Budget.—There are several alternatives in budgetary policy.¹¹ First, there is the *annually balanced budget plan*. This attempts to maintain government revenue equal (or in excess of) government expenditures irrespective of economic conditions. This is an ultra-conservative (the so-called "sound finance") programme which, under modern conditions, cannot be made to work. It requires that tax rates be cut when a rise in national income is anticipated and increased when a national income decline is forecast. In the former case public expenditures would be increased and in the latter decreased. Such a policy would accentuate fluctuations in economic activity. Tax rates and expenditure programmes would be altered at times and in directions most injurious to high employment and stable prices. The annually balanced budget is not feasible in the modern world.

In the second place, there is the *managed compensatory budget policy*. This is the plan advocated by the supporters of fiscal policy for economic stabilization. The theory of this budget is simple. Whenever employment is adjudged "about to fall" below

¹¹See Committee for Economic Development, *Taxes and the Budget* (New York, Nov., 1947), pp. 20-34.

a specified high level, taxes would be reduced and expenditures increased by the amounts necessary to prevent the forecast from materializing. Conversely, when employment seems "about to rise" above the level in question, tax rates should be raised and expenditures cut.

As in the case of the annually balanced plan, the managed compensatory budget depends for its successful operation upon accurate forecasting of business fluctuations. The degree of accuracy required has not been achieved in the past and we have little reason to believe that it will be attained in the near future. If forecasting is inaccurate, the compensatory budget might easily accentuate fluctuations rather than moderate them. Timing is extremely important.

One weakness of the managed compensatory budget is that periods of rapid increases in spending may be followed by ineffective efforts at retrenchment. The plan calls for enhanced public expenditures without higher tax rates at some stage of the business cycle. In the present unsatisfactory state of economic forecasting it is always possible to make out a plausible case that depression is imminent. This is politically expedient because it avoids the necessity of decreasing expenditures and increasing tax rates. Hence the general drift is in the direction of enhanced public debt. If, as already indicated, the economy "grows up to the debt" through an enhanced national income, the "burden" will not be troublesome. But for other reasons (i.e. threat of inflation, credit control difficulties, future government financing) it may be desirable to reduce the debt. Any real attempt at debt reduction under this budgeting scheme would necessitate large surpluses in prosperity created by *raising tax rates* and reducing expenditures. The managed compensatory budget, therefore, presents the alternatives of no debt reduction (rather a growth) or frequent and unsettling changes in the tax rate.

A third approach to government finance has been called the *stabilizing budget policy*. The object of this programme is to "promote stability, government economy and debt reduction without requiring impossible accuracy of forecasting business fluctuations."¹² The essential features of the stabilizing budget are (1) set the tax rate to balance the budget and provide for debt retirement at an agreed high level of employment and (2) leave unaltered the tax rates thus set unless there is a major change in

¹²*Ibid.*, p. 22.

national policy or circumstances of national life. Under this system fluctuations in national income would not call for variations in tax rates. Expenditures too would not be altered except for the "automatic response" in some categories, e.g. unemployment compensation. Adjustable items like public works could be used to insure the maintenance of an agreed total expenditure programme.

The stabilizing budget makes provision for changing the tax rate under special circumstances. Improvement in international relations would justify a reduction in expenditures for defence and thus permit a lowering of taxation. On the other hand, an extension of government "services" in response to popular demand might require the imposition of higher rates.

To recapitulate, the stabilizing budget policy involves non-fluctuating tax rates of a level which at a high degree of employment (say 95 per cent), will yield a moderate surplus which is to be used to reduce the national debt. If employment rose above the agreed level, the surplus would be larger and debt reduction could proceed at a faster pace. If employment fell below this point, the surplus would shrink and debt reduction taper off, or even cease for the time being. In any case, the plan provides for reducing the debt when inflationary pressure is great. The stability of tax rates is another point in favour of this approach. It obviates one element of uncertainty in business. The deterring effect of fluctuating tax rates on investment and business enterprise in general would be avoided. This is the chief difference between the stabilizing budget plan and the usual fiscal policy measures advocated. Whereas the former calls for stability of tax rates, the latter makes tax manipulation a basic weapon of fiscal policy.

Background of Traditional and Modern Schools of Thought re Fiscal Policy.—This brief survey of fiscal policy principles and programmes suggests the contrast between the traditional or orthodox school of public finance and the modern school which has risen to prominence since the 1930's. As has been pointed out, the former "sound finance" group advocates balanced budgets and rapid debt retirement. To a considerable extent this type of thinking was the result of the inflation which wars of the nineteenth century and World War I caused. The policy advocated applied to a simpler, more flexible economy than that which prevails today. If prices and costs were readily adjustable in relation to one an-

other, or a threat of inflation were imminent, "sound finance" as here defined would be an appropriate policy. That is, if monopolistic price policies were absent, labour union practices unknown, bond issues by corporations prohibited, the traditional school would be in a strong position. But in a world of economic frictions and cyclical fluctuations in business, the argument for a balanced budget and constant debt reduction is inadequate. Only under conditions of strong inflationary pressure does the orthodox school have a strong case in the modern world.

Whereas the "sound finance" philosophy grew out of the inflationary climate of the nineteenth century, "fiscal policy" in the modern sense resulted from the deflationary pressures of the 1930's.¹³ Although fiscal policy provides for anti-inflationary measures (reduced public spending, increased taxation, and reduction of bank held national debt), the bulk of writing on the subject deals with counter-deflationary theory and practice. This reflects the mature economy doctrine and the fear of chronic unemployment resulting from lack of private investment opportunities.

Apart from objections to the mature economy philosophy, there are several weaknesses in the modern fiscal policy programme. The most significant of these are: (1) the aggregate approach (overall purchasing power relative to production) makes little provision for the cost-price structure (skilled labourers may be out of work because their *particular* wage rates are too high), hence inflationary pressures may develop while there is still a considerable margin of unemployment; (2) frequent tax adjustments lead to uncertainty in business and may accentuate unemployment; (3) the difficulty of timing changes in expenditures and taxes; and (4) the tendency to a growth in the public debt which may become burdensome and certainly enhances the difficulties of credit control. The stabilizing budget would eliminate, or at least mitigate, some of the defects in the popularized fiscal policy.

Despite the objections which can be raised against the modern fiscal policy philosophy, it is significant in that the government does assume responsibility for the efficient operation of the economy as a whole. Unemployment becomes the concern, not only of the labourers, entrepreneurs, and local government directly involved,

¹³ C. O. Hardy, "Comments," in *Public Finance and Full Employment*, pp. 136-9.

but of the national government as well.¹⁴ This sense of responsibility which grew out of the great depression and economic writings pertaining thereto (especially those of a Keynesian nature), is generally accepted even by those who oppose some of the methods advocated by the Keynesian school. In the words of the Canadian White Paper on Employment and Income: "In this paper, the Government has stated unequivocally its adoption of a high and stable level of employment and income, and thereby higher standards of living, as a major aim of Government policy. It has been made clear, that if it is to be achieved, the endeavour to achieve it must pervade all government economic policy. It must be wholeheartedly accepted by all economic groups and organizations as a great national objective, transcending in importance all sectional and group interests." This is the true social approach to economics.

¹⁴Co-operation between the Dominion and provincial governments is essential to the success of fiscal policy in Canada. In the absence of such co-operation it would be possible for the provinces to neutralize (or at least make less effective) the federal government's programme. For instance, an increased spending and lower tax policy by the Dominion might be counteracted by reduced expenditure and higher taxes on the part of the provinces. At present (1948) there is no assurance that the requisite co-operation will be forthcoming. But a step was taken in this direction as a result of the Dominion-Provincial Tax Rental Agreements Act, 1947.

Under the terms of the British North America Act, the provinces were guaranteed subsidies in lieu of revenue from customs tariffs and excise taxes. These have been supplemented from time to time by special grants. Seven of the nine provinces have made arrangements with the Dominion government under the new Act. This assures the signatory provinces the continuance of the B.N.A. Act subsidies and the granting of additional payments in return for certain concessions in taxation.

The substance of the Dominion-Provincial Tax Agreements Act relative to additional grants is as follows: In return for the withdrawal of the provinces from the income tax, succession duty, and corporation tax fields for a period of five years, the Dominion has agreed to pay them a subsidy of either \$12.75 per capita plus 50 per cent of their income and corporation tax revenue in 1940, or a straight subsidy of \$15.00 per capita.

CHAPTER XXXIII

INTERNATIONAL TRADE

BASICALLY, international trade differs little from domestic or inland trade. International commerce is primarily a matter of individuals and organizations in one country selling to and buying from individuals and organizations in other countries. In conformity with the economic motive, people sell in the market where prices are relatively high and buy where prices are low. The fact that the markets concerned are located in areas beyond the borders of the sellers' or buyers' country does not annul this fundamental principle of trade. Despite the obvious advantage of selling in the "dearest" and buying in the "cheapest" markets an attitude prevails that, while domestic trade is highly desirable, foreign trade, especially the importation of goods, should be called in question. According to this popular but erroneous view, exports are economically beneficial to the nation, but imports should be discouraged. The validity of such *reasoning* will be examined in the following chapter.

Although there is essentially little difference between foreign and domestic trade, certain characteristics peculiar to the former have caused economists to give special consideration to international trade. One of the peculiar features of foreign commerce is the fact that goods cross international boundaries, as a result of which, in many instances, customs duties are payable or an export bounty is granted. This artificial interference with the exchanging of commodities brings up the problem of free trade *versus* protection, a topic which will be discussed in the next chapter. Again differences in language and business methods add to the difficulties of conducting trade. Furthermore, variations in the types of currencies used complicate, but do not give rise to, the problem of foreign exchange. One of the chief reasons for a separate treatment of international trade is the relative mobility of productive resources (labour and capital) within a country as contrasted with the immobility of such factors among countries. That is to say, the factors of production tend to move freely from

place to place within a given country but flow much less readily from country to country. This *internal mobility and external immobility* affects the value of goods traded internationally in a manner differing somewhat from the principles determining the value of goods produced and traded domestically.

The concept that the value of internationally traded goods is determined by a set of forces differing from those applicable to domestic commodities cannot be pushed too far. In the last analysis, apart from political boundaries, duties, language, business methods and currency systems, a great deal of domestic commerce closely resembles foreign trade. Internal trade is largely a matter of people in one *region* dealing with people in another *region* within a given political unit. A considerable degree of factor immobility will exist between these regions. If the regions are in different countries, international trade arises on practically the same basis as inland commerce. The essential geographic similarity between domestic and foreign economic relationships has caused some writers to stress the term "*interregional trade*" as contrasted with international trade.¹

ECONOMIC BASIS OF INTERNATIONAL TRADE

Distribution of Resources.—The fundamental reason for international trade is the search for economic gain. Profit seeking does not stop at political boundaries. If net gains are enhanced by selling or buying abroad, business men act accordingly. But this exchange of commodities has a geographic basis. Natural resources are so distributed throughout the world that some countries (or regions) have an economic advantage (i.e. can produce at a lower cost) over others in the production of particular commodities. The superiority may be *acquired* by long experience, as in the case of Swiss watch making or Lancashire cotton manufacturing. This natural or acquired superiority of given countries over others in the production of certain commodities leads directly to a consideration of the principles of absolute and comparative advantage, two important concepts in the study of international trade.

Absolute Advantage.—For the sake of simplicity we shall consider trade between two countries only in illustrating the principle of absolute advantage. In this case one country can produce a particular good at a lower cost than a second country, but the

¹Bertal Ohlin, *Interregional and International Trade* (Cambridge, Mass., 1933), p. 33.

second country enjoys superiority in the production of some other commodity. Each country has an *absolute advantage* over the other with reference to the article which it can produce most efficiently. For instance, Canada can produce wheat more cheaply than Cuba, but Cuba has an absolute advantage in the production of cane sugar. The following numerical illustration will help to show why trade between the two countries would take place with *mutual* economic benefit. The figures are selected merely to illustrate the principle, not for their economic accuracy.

In Canada, one composite unit of productive factors is required to produce 40 bushels of wheat, or it can produce 10 hundredweight of sugar. In Cuba, on the other hand, one composite unit of productive factors is required to produce 24 bushels of wheat, or it can produce 30 hundredweight of sugar. Here Canada has an absolute advantage in the production of wheat and Cuba in the production of sugar. Barring artificial restrictions, will trade develop to mutual advantage between the two countries? The answer is, Yes. Canada will exchange wheat for sugar with Cuba.

Let us demonstrate why this mutually advantageous trade will emerge. In Canada 10 hundredweight of sugar is equivalent to 40 bushels of wheat. In Cuba 10 hundredweight of sugar is equal in value to 8 bushels of wheat. Therefore, it will be economically desirable for Canada to export wheat and import sugar provided Canada can secure 10 hundredweight of sugar *for something less than 40 bushels of wheat*. Conversely, it will be profitable for Cuba to export sugar and import wheat if she can get something more than 8 bushels of wheat for 10 hundredweight of sugar. The possible zone of trade, i.e. the range within which mutually beneficial exchange ratios of sugar for wheat might be established is 10 hundredweight of sugar for somewhere between 8 bushels and 40 bushels of wheat. Let us suppose that the countries here considered trade on the basis of 10 hundredweight of sugar for 20 bushels of wheat. Canada would gain (save) 20 bushels and Cuba would gain 12 bushels. Both countries are benefited by this exchange although, in this case, Canada gains more than Cuba. But so long as each gains *something*, it will be economically advantageous for Canada to specialize on the production of wheat and Cuba on sugar exchanging their surplus products. If the terms of trade (the ratio at which goods are exchanged) were 10 hundredweight of sugar for 40 bushels of wheat, Canada would gain nothing and might as well trade at home. On the other hand, if the terms were

10 hundredweight of sugar for 8 bushels of wheat, there would be no advantage to Cuba in exporting sugar for wheat.

It should be observed that, as a result of trade, sugar can be sold at a lower price in Canada than that which would have prevailed if sugar had been produced within that country. A given amount of home produced sugar would require the use of a greater quantity of productive factors than would be necessary to grow enough wheat to exchange for an equivalent amount of Cuban sugar. That is, the cost of acquiring (e.g. 10 hundredweight of) sugar by exporting wheat is less than the cost of producing it at home. Hence imported sugar can be sold in Canada at a lower price than would be possible if it were produced within the country.² For similar reasons wheat imported by Cuba will be cheaper than the home-grown product. This is the justification for the contention that the value of goods traded internationally is established by principles differing somewhat from those governing the value of commodities produced and sold at home. As already indicated, the reason for this difference is the internal mobility and the external immobility of the productive factors.

Comparative Advantages.—In the preceding section, it was assumed that Canada had an absolute advantage in producing wheat and Cuba in sugar. We have seen how they could specialize and trade with mutual benefit. The question may now be asked: "If one country had an advantage in the production of *both* commodities could trade take place in these goods between the two countries?" This depends on circumstances. Incidentally, conditions favourable to trade *usually* exist. Let us suppose that production costs in the countries concerned are as follows:

CANADA

One composite unit of productive factors is required to produce 40 bushels of wheat.

One composite unit of productive factors is required to produce 10 hundredweight of sugar.

CUBA

One composite unit of productive factors is required to produce 20 bushels of wheat.

One composite unit of productive factors is required to produce 8 hundredweight of sugar.

²To avoid unnecessary complications transportation costs and other expenses *re goods in transit* are disregarded.

In this case Canada has an advantage in the production of *both* wheat and sugar, but has a *greater* advantage in wheat than in sugar. In conformity with our previous analysis, 10 hundredweight of sugar is equivalent to 40 bushels of wheat in Canada, whereas it is equal to 25 bushels of wheat in Cuba. The zone of trade is now 10 hundredweight of sugar for somewhere between 25 and 40 bushels of wheat. Thus it is possible for trade to develop out of which both countries would benefit. This despite the fact that Canada can produce both wheat and sugar at a lower cost than Cuba. If the exchange rate established were, say 10 hundredweight of sugar for 30 bushels of wheat, Canada would gain 10 bushels and Cuba 5 bushels. The zone within which trade can occur is narrower in this case than in the one previously considered, but the basis for an exchange of goods between the two countries remains.

The actual ratio of exchange depends upon *reciprocal demand*, that is, upon the relative strength of the countries' demand for each other's products. If Cuba's demand for wheat is proportionately stronger than Canada's demand for sugar, Cuba is under incentive to offer a large quantity of sugar for a given amount of wheat. Canada, therefore, would tend to have an advantage in bargaining power. But the circumstances might be reversed. If Canada were very anxious for sugar, she would be inclined to offer a considerable quantity of wheat for a specific amount of sugar.

In the case we are now considering, it should be noted that while Canada can produce both products more cheaply than Cuba, she has a *greater* advantage in the production of wheat than in sugar. The wheat cost of production ratio is 2:1 and the sugar ratio 1.25:1. Canada has a superior advantage in wheat production and Cuba an *inferior disadvantage* in sugar. Under such circumstances it is economically feasible for a country to produce and export the commodity in which it has the greater superiority and to import that in which its advantage is less pronounced. The other country, of course, should specialize in and export the goods in which it has the smaller disadvantage.

Many illustrations of comparative advantage can be seen in business and professional activity within a country. The high-class lawyer hires a secretary to do his typing even though he may be a more competent typist than the person he employs. If the lawyer can hire a secretary for 50 cents an hour to do routine clerical work while he himself can earn \$20.00 an hour, he would

be economically unwise to take time off from his main profession to do secretarial work. Similarly, a nation gains economically by concentrating on the production of those things in which it has a superior advantage and import those in which her superiority is not so marked.

FINANCING FOREIGN TRADE

There are two important aspects of international economic relationships. In the first place, there is the problem of providing the means of payment for current transactions, e.g. financing the importation and exportation of goods. In the second place, there is the matter of foreign investment, or so-called capital movements, particularly those on long-term account. Much foreign investment does not involve repayment of principle for a period of years. Both types of transactions are involved in the problem of foreign exchange.

Foreign Exchange.—The term foreign exchange refers to the price which the residents of a given country have to pay for the money of other countries in terms of their own. Foreign exchange to Canadians is the price they have to pay in Canadian currency for American dollars, British pounds, French francs, and so forth. The process of exchanging the money of one country for that of another is carried on through the medium of dealers in foreign exchange, chiefly banks. Under normal circumstances Canadian chartered banks have deposits payable to them in foreign banks. Conversely, banks of other countries have deposits payable to them in Canadian banks. The deposits in *other countries* are the fund of foreign exchange upon which the banks of a given country can draw to satisfy the demand of its nationals for the currencies of foreign countries.

The supply of foreign exchange in a given country (e.g. Canada) comes from citizens who are entitled to payment in the money of another country. Canadian exporters of goods, those who render services (e.g. merchant marine carrying trade) for other countries, and those who borrow abroad have titles to a quantity of foreign currency which they wish to exchange for Canadian dollars. These claims are sold to our banks for Canadian dollars. Such transactions tend to build up deposits in foreign countries payable to Canadian banks. On the other hand, the demand for foreign exchange originates with Canadians who are under obligation to make payment in the currencies of other countries to pay for

imports, meet interest charges, or fulfil similar obligations. In order to liquidate their commitments abroad they buy foreign exchange from our banks. The banks simply sell them drafts drawn against their deposits in the country or countries concerned. Thus it can be seen that, whereas payments due to Canadians from abroad build up deposits payable to our banks in foreign countries, payments due by Canadians reduce them. We must now consider the principles governing the *rates* (prices) at which banks of a particular country will buy and sell the currencies of other nations.

Foreign Exchange under Gold Standard Conditions.—There are two fundamental questions regarding foreign exchange rates under gold standard conditions which call for an answer: First, what sets the *par* of exchange (the normal, or long-term, rate) and, secondly, what determines the day to day (short-term) rates? The pre-1914 par of exchange between the British pound and the Canadian (or American) dollar was £ = \$4.866. This was established by the gold content of the currencies concerned. The par simply meant, in this case, that the pound contained 4.866 times as much fine gold as the dollar.

But it would be an unusual state of affairs if the rate on any particular day were at par. Ordinarily the pound would be worth slightly more or somewhat less than \$4.866. The daily rates which fluctuated midly above or below par were determined by the supply of and demand for foreign bills of exchange. Suppose that on a given day Canadian exporters sold goods to the United Kingdom valued at £20,000 and importers bought goods from the British also valued at £20,000. The supply of sterling (originating with exporters) and the demand for sterling (arising from import transactions) would be equal, namely, £20,000. Under such circumstances the exchange rate would be at par. If, however, exports amounted to £20,000 and imports only to £12,000, the supply of sterling would exceed the demand (by £8,000) and the pound would fall in terms of dollars. Conversely, if the value of exports were £20,000 and that of imports £30,000, the pound would be at a premium in our money. Hence the daily rates of exchange were established by the forces of demand and supply in the market for foreign drafts.

To what extent could foreign exchange rates fluctuate above or below par? This is the question we must now answer. Referring again to the pre-1914 pound-dollar relationship, the pound might rise as high as \$4.886 and, on other occasions, as low as \$4.846,

but never above or below these figures.³ The actual rate was usually somewhere between these extremes. The limits to the range of fluctuation, the so-called *gold points*, were set by the cost of shipping gold from one country to the other.⁴ It cost approximately 2 cents to ship a quantity of gold valued at £1 across the Atlantic. Consequently, exporters who had sterling for sale would not be obliged to accept less than \$4.846 per pound because they could convert their sterling into gold abroad and import the precious metal at a cost of 2 cents per pound and sell it to Canadian banks at the fixed price of \$4.866; thus their net return would be \$4.846. Similarly, importers would not be compelled to pay more than \$4.886 per pound for sterling. Otherwise they would buy gold from our banks at the rate of \$4.866 per pound and ship it across the Atlantic at a cost of 2 cents; hence their total cost would be \$4.886 for each pound of British currency. So far as Canada is concerned the exchange rate $\text{£} = 4.846$ was a *gold import point*, and $\text{£} = 4.886$ a *gold export point*. But the range of fluctuation set by the gold points was narrow, namely, 4 cents. Therefore we may say that under gold standard conditions, foreign exchange rates are quite rigid.

FOREIGN EXCHANGE UNDER INCONVERTIBLE PAPER CONDITIONS

When currencies are not convertible into gold (or whatever metal is standard money material) and governments make no effort to maintain artificially the external value of their money, a condition of *free exchange rates* prevails. In this case the currencies concerned are allowed to "seek their own level" as regards external value (i.e. value relative to the monetary units of other countries). To what extent does this situation differ from the gold standard, and how are the rates of exchange determined? Let us proceed to answer these questions.

In so far as no gold flows from country to country for monetary purposes (although it may still move as a commodity), the gold points disappear under paper standard conditions. Hence the range of fluctuation may be (usually is) much greater than under the gold standard. The relatively *fixed* nature of the exchange rates no longer exists. The daily rates, as in the gold standard

³The rates quoted are cost rates, i.e. they do not include profit to foreign exchange dealers.

⁴The range of fluctuation might vary as a result of changes in expense of shipping gold.

case, are determined by the supply of and demand for foreign bills. But what about the long-term rate, or par of exchange? Does such exist under inconvertible paper standard conditions?

Strictly speaking the par of exchange in the gold standard sense of the term does not exist. But there is a *tendency* for a definite rate of exchange to establish itself in the long run. Such a rate results from the operation of the so-called *purchasing power parity principle*. This principle involves a comparison of the purchasing power of a given country's currency within that country with the purchasing power of a second country's currency within the second country. For example, the purchasing power of the Canadian dollar within Canada is compared with the purchasing power of the British pound in the United Kingdom. It follows, therefore, that the relative price levels of these countries affect the exchange rate. If \$5.00 purchases the same amount of goods in Canada as £1 buys in Great Britain, the *par* of exchange would be £1 = \$5.00.

The process whereby the normal exchange rate becomes established is as follows. Suppose the rate is £ = \$4.00, and a pair of shoes which cost \$5.00 in Canada sells for £1 in the United Kingdom. Then instead of buying shoes at home, Canadians will use \$4.00 to buy a pound and therewith obtain British shoes. Assuming that the prices of other commodities are comparable, Britishers will not buy an offsetting amount of goods from Canada. The result will be a strong demand for pounds and the price of sterling will go up in terms of Canadian dollars. This will continue till there will be no longer any advantage to Canadians in buying British footwear, i.e. when the rate of exchange is £1 = \$5.00. If, on the other hand, the rate of exchange were £1 = \$6.00 and the prices of shoes in the two countries as indicated above, Canadians would buy at home and Britishers would use pounds to purchase Canadian dollars and thus import shoes from Canada. This relatively strong demand for dollars would cause a relative decline in the pound till there was no further advantage to the British in buying Canadian shoes. It should be observed that in the first case, when the pound exchanged for less than \$5.00, imports to Canada and exports from the United Kingdom were stimulated. In the second case, when the pound exchanged for more than \$5.00, the opposite import-export tendencies prevailed.

While the purchasing power parity principle undoubtedly operates to establish exchange rates, it cannot be regarded as a complete substitute for the "relative gold content" in determining

the *par* value of various currencies. It results in a stable *par* only on the assumption that price levels do not vary and that there are no changes in tariffs and other artificial interferences with trade. But price levels do change and with them the *par* of exchange, hence there is no long-run stability in the sense of a fixed exchange rate. Again the sudden imposition of an import duty may affect the rate of exchange (because of its influences on the volume of imports, hence upon demand for foreign currency) although relative price levels for a time may remain unaltered. Changes in income and flights of capital (international borrowing and lending for speculative and political reasons) have a similar effect. Furthermore, the rate of exchange itself tends to affect directly the prices of goods entering into international trade and indirectly prices of domestic commodities, and hence exerts an influence over general price levels. For instance, in our first example, as Canadians bought more shoes abroad on account of the favourable exchange rate, the extra demand for British shoes would cause their price to rise, and this would be reflected in the general price level. If the heavy exportation of shoes necessitated the bidding away of productive factors from other industries, the domestic price level rise would be accentuated. In other words, price levels and exchange rates are interdependent and react on one another. Hence it cannot be said that under inconvertible paper standard conditions, foreign exchange rates are established uniquely by relative price levels.

Controlled Exchange.—Under certain circumstances, particularly during a business depression or state of war, countries with inconvertible paper currencies impose restrictions on trade and financial transactions in order to control the external value of their currencies. During the two world wars, Great Britain “pegged” the pound in relation to the American dollar. In the early stages of World War II, Canada took similar steps. With the outbreak of hostilities the Canadian dollar fell sharply in New York. On account of our political and economic relations with the United Kingdom, timorous Americans rushed to sell their holdings of Canadian assets, thus putting pressure on our dollar. The Dominion government was faced with the alternative of allowing the Canadian dollar to “find its own level” or to fix its value in relation to United States money. To have chosen the first alternative would have meant further depreciation of the Canadian dollar, greater upward pressure on prices, and increased dollar cost of the war, thus

leading to enhanced budgetary difficulties of the government. Hence the second approach was adopted. On September 16, 1939, the Foreign Exchange Control Order was passed by the governor-in-council and the Canadian dollar was fixed at 90 cents in terms of American currency.

But a mere decree on the part of the Canadian government that henceforth the Canadian dollar would be worth 90 cents in United States money would be ineffective without the machinery, resources, and procedure necessary to exchange control. Briefly the scheme was as follows. The key institution was the Foreign Exchange Control Board which operated through its agents the chartered banks. Gold and foreign exchange held by the Bank of Canada at the time of the Order-in-Council were transferred to the Foreign Exchange Control Board. Furthermore, Canadian residents were required to surrender their claims to American dollars (e.g. bank deposits in United States banks payable to Canadians) to the Board. This applied not only to ownership of United States currency which existed at the time the order was issued, but to subsequent claims as well. For example a Canadian exporter of goods to the United States was compelled to sell his American exchange to the Board. He, like all other owners of United States funds after the Board was established, was paid in Canadian currency at the rate of \$1.10 for each United States dollar. As a result of such transfers the Board's holdings of American exchange were replenished. During the course of the war one great source of United States exchange was the investing in Canadian assets by Americans. Thus the proceeds of exports and "capital inflow" constituted the chief means of acquiring United States funds which the Foreign Exchange Control Board could sell to pay for essential imports from the United States.

We have seen how the Foreign Exchange Control Board got possession of the supply of gold and foreign exchange, mainly United States dollars, available to Canada. By these means the Board controlled the supply side of the foreign exchange market in this country. What about demand? Here too the Board was in a strategic position. The demand was controlled by import restrictions and by rationing foreign exchange. In other words only such imports as were deemed "desirable" could be legally imported and foreign exchange would be sold only for "legitimate" payments outside the country. Many Canadians remember the difficulties encountered in attempting to secure United States money for the

purpose of travelling in that country. Pleasure travel was practically banned. But American dollars could be obtained from the Board for essential purposes at its selling price of \$1.11 in Canadian money. Thus it can be seen that only through its control over both the supply of and demand for American currency in Canada was the Foreign Exchange Control Board able to "peg" the Canadian dollar at 90 cents in terms of United States currency.

Foreign Exchange in the "Black Market."—In addition to the official exchange market wherein Canadian dollars were bought and sold at approximately 90 cents in terms of the American dollar, there existed the unofficial or "black" market. In the latter Canadian currency might be quoted close to or considerably below the official rate. This market exists because non-residents who have claims to Canadian money cannot convert it into American dollars at the official rate. If such persons are very anxious to sell their Canadian funds, they offer them to other non-residents at a price below that prevailing in the official market. Observe that the transfer takes place between *non-residents* of Canada.

The supply of Canadian dollars in the unofficial market arises from the following sources: (1) bank balances held by non-residents of Canada at the time when foreign exchange control was introduced; (2) sales of Canadian securities bought for cash since 1940 and registered with the Foreign Exchange Control Board; (3) sales of Canadian real estate; (4) liquidation of American direct investment; and (5) proceeds from maturing securities payable in Canadian funds. Dollars thus acquired could be used only for limited purposes. The most important of these were: (1) purchase of Canadian securities; (2) purchase of Canadian real estate; (3) making loans and direct investments in Canada; and (4) tourist expenditures in this country. Note that Canadian funds thus secured could not be converted directly into American dollars, nor be used by non-residents to pay for imports from Canada. As we have seen, Canadian exporters are compelled to surrender the proceeds of their sales (which must be in American dollars) in the United States to the Foreign Exchange Control Board and receive payment in *Canadian currency*. On the other hand, of course, the Board will provide American dollars at official rates for legitimate current transactions, e.g. payment for certain goods legally imported, interest and dividends payable to non-residents, and redemption of Canadian bonds payable in American funds. In brief, the "black market" exists because, in the face of exchange

restrictions, non-residents of Canada who wish to sell their claims to Canadian dollars are willing to sell them to other non-residents at a price below that quoted in the official market.

Content of the Nation's Balance Sheet.—While under ordinary circumstances the bulk of international commercial and financial transactions originates with individuals and private organizations, yet it is possible to get a picture indicating a particular nation's economic relations with the rest of the world for a definite period and its position at a given time. Such a picture is set forth for Canada in Table XLV. This table is a balance sheet showing the financial claims which Canada had against other countries (credits) and, conversely, all claims against Canada originating in other countries (debits).

Under the heading Current Transactions there are two classes of items. First, there are those of a tangible nature which are definitely recorded when goods cross the international boundary. These are known as *visible items*. Merchandise and non-monetary gold are in this category. Secondly, there are the intangibles, the so-called *invisible items*. Examples of the latter are: tourist expenditures, interest payments, and shipping charges. Both types of transactions must be considered in appraising a nation's international financial position. In the days of the international gold standard, monetary gold occupied a place of special prominence in the nation's balance sheet. While gold still plays an important role in international finance, it is much less significant than it was in former times. The importance of capital movements (international investment) will be considered in the following section.

The Balance of Payments.—A study of Table XLV will reveal that for each of the years here shown, the value of Canada's *visible* exports to the rest of the world exceeded that of her imports. This is known as a *favourable balance of trade*. If the value of visible exports had been less than that of imports the balance would have been unfavourable. Actually the terms *favourable* and *unfavourable* balance of trade mean little so far as the economic prosperity of the country is concerned. These expressions are taken from the mercantilistic teachings of the sixteenth and seventeenth centuries when an export surplus was regarded as highly desirable because it meant an influx of the precious metals.

Of much more significance is the *balance of payments on current account*. In this both visible and invisible items are taken into

TABLE XLV
CANADA'S BALANCE OF INTERNATIONAL PAYMENTS*
(Millions of Canadian dollars)

	1939			1942			1945			1946†		
	Credits (+)	Debits (-)	Net (+ or -)	Credits (+)	Debits (-)	Net (+ or -)	Credits (+)	Debits (-)	Net (+ or -)	Credits (+)	Debits (-)	Net (+ or -)
CURRENT TRANSACTIONS												
Merchandise.....	906	713	+ 193	2,515	1,406	+ 1,109	3,657	1,442	+ 2,215	2,398	1,822	+ 576
Non-monetary gold.....	184	..	+ 184	184	..	+ 184	96	..	+ 96	96	..	+ 96
Tourist and travel expenditures.....	149	81	+ 68	81	26	+ 55	165	83	+ 82	219	135	+ 84
Interest and dividends.....	57	306	- 249	67	270	- 203	76	253	- 177	74	312	- 238
Freight and shipping.....	102	119	- 17	221	228	- 7	340	222	+ 118	287	210	+ 77
Other current transactions.....	59	112	- 53	308	345	- 37	301	912	- 611	267	404	- 137
Total current account.....	1,457	1,331	+ 126	3,876	2,275	+ 1,101	4,635	2,912	+ 1,723	3,341	2,883	+ 458
CAPITAL AND OTHER NON-CURRENT TRANSACTIONS												
Capital (investment).....	558	694	- 136	1,235	1,341	- 106	583	1,222	- 639	928	1,282	- 354
Special gold transactions‡.....	2	2	..	23	23	- 1,000	33	33	..	150	150	..
Billion dollar contribution.....	..	..	..	..	1,000	..	..	..	..	..	..	..
Mutual Aid.....	..	..	..	..	..	..	..	940	- 940	..	25	- 25
Contributions to U.N.R.R.A.....	..	..	..	..	..	..	..	34	- 34	..	68	- 68
Military and other relief.....	..	..	..	..	2	- 2	..	67	- 67	..	14	- 14
Balancing item§.....	..	..	+ 10	..	..	7	..	..	+ 7	..	..	+ 3
Total capital and other non-current transactions.....	..	..	+ 10	..	..	7	..	..	+ 7	..	..	+ 3
			- 126			- 1,101			- 1,723			- 458

*Source: Department of Trade and Commerce, *The Canadian Balance of International Payments, Preliminary Statement, 1946*.

†Subject to revision.

‡This represents gold or United States dollars received from the United Kingdom in part settlement of her deficiency with Canada and used in turn to settle part of Canada's deficiency with the United States.

§This balancing item reflects possible errors and the omission of certain factors which cannot be measured statistically.

consideration. Here, too, the balance may be favourable or unfavourable. In the former there is a credit balance, in the latter, a debit. Once again for each year recorded in Table XLV, Canada has a favourable balance. But it is not as large as the balance on merchandise account only. The balance of payments on current account is significant because a credit balance indicates a country's capacity to have a net capital export (invest abroad or reduce its indebtedness to foreigners) or make gifts to other nations. Conversely, a debit balance reveals the extent of a country's net capital imports (borrowing abroad).

While a given country may have a favourable or unfavourable balance on current account, the sum of all debits and all credits must be the same. That is to say, the *total* balance of payments cannot be either favourable or unfavourable. When international capital movements (plus gifts and similar items) are taken into consideration along with current transactions, the balance of payments must balance. At any given time, items (other than gifts) for which payment has not been received, involve corresponding loans to the country (or countries) from which payment is due. Hence the total balance of payments, which includes all items, must be in equilibrium. It will be observed that in 1939, Canada's favourable balance of payments on current account amounting to \$126 million was offset by an equivalent net export of capital. In the later years, gifts to other countries played a prominent role in bringing the statement into balance.

To those unfamiliar with the nature of an international balance of payments statement, it may seem puzzling that an export of capital should be registered as a debit, a charge against the country investing abroad. A simple way of clearing up the mystery is to regard all *payments due to* a country as *credits* and all *payments due by* a country as *debits*. Obviously, in current transactions, all visible exports are credits and all visible imports debits. The same is true of invisible items. When foreigners travel in Canada, the payment is due us. If Canadians employ the British merchant marine to carry Canadian goods, the payment is due by us. But what about capital movements? When Canadians invest abroad (e.g. buy foreign securities or set up branch plants in other countries) the payment is *due by us*, hence it appears as a debit. Conversely, when we import capital, Americans and other people resident abroad buy Canadian securities or establish branch plants in this country. Here the payment is due us and, therefore, appears as a credit on

the balance sheet. To summarize: with one exception, exports are registered as credits and imports as debits. Capital movements are the exception, they have the opposite effect on the balance sheet. Capital export, of course, can be regarded as an import of securities.

Gifts and similar items are registered in the same way as capital movements. In Table XLV the Billion Dollar Contribution to Great Britain in 1942, and assistance under the Mutual Aid scheme are shown as charges against Canada. The equivalent credits are included in merchandise exports for the corresponding years. Basically, help was given in the form of goods. Contributions to UNRRA, likewise, are shown as debits. A study of the data in Table XLV will substantiate the statement that Canada's ability to export capital on balance and make gifts to other countries depends upon the size of her favourable balance of payments on current account. The credit balance on current account is offset by a debit balance in capital and other non-current transactions. If Canada had experienced a net inflow of capital, this would be reflected in a debit balance on current account.

International Investment.—Capital movements among countries are of great economic importance. It has been said that the exportation of capital is a means whereby advanced countries share their prosperity with backward regions.⁵ To a large extent, the volume of international trade depends upon the amount of foreign investment. Certainly the pioneer areas could not have furnished in such great quantities the raw materials and markets for well developed regions, unless the latter had invested extensively in the former.

As we have seen, countries which export capital on balance (i.e. lend more than they borrow) tend to have a favourable balance of payments on current account. The reverse is true of countries which have a net import of capital. In the course of its international financial experience, an advanced country tends to reach a position where the interest payments due it plus any borrowing it may do abroad exceed the amount of its new foreign lending plus interest payments it may have to make. Such a country is said to have reached the *mature creditor* stage and tends to have an unfavourable balance of trade. Again, a new country which is borrowing heavily on balance abroad tends to have an excess of visible imports. But when interest payments on imported capital plus any foreign lending (or, what amounts to the

⁵K. E. Boulding, *The Economics of Peace* (New York, 1946), chap. x.

same thing, repayment of previous borrowings) exceed the amount of new borrowing abroad and interest receivable, the country tends to have an excess of exports. Under such circumstances it is a mature debtor country. The large interest and dividend payments chiefly account for the excess of exports. In the next phase of its development, the immature creditor, new investment abroad plus interest due foreigners becomes greater than new borrowing and interest receivable. Here too the balance of trade is favourable. But it still owes more to foreign countries than the rest of the world owes it. Eventually the country reaches a mature creditor stage. Now its portfolio of foreign investments is greater than the volume of its foreign obligations on long-term account. But interest and dividends receivable from abroad enhance the value of its imports beyond that of its exports. Thus we see that a given country *tends* to go through four stages in its international financial experience, namely, immature debtor, mature debtor, immature creditor, and mature creditor. In the first and fourth stages the balance of trade tends to be unfavourable, in the second and third, favourable.

Canada's International Investment Position.—For many years prior to 1900 and during the first decade of the present century, Canada was borrowing large sums abroad; first from Great Britain and later from the United States. Two world wars had a disturbing effect upon the natural course of Canada's international financial relationships, but the general tendency to shift from an immature debtor to a more "advanced" stage has been evident. Some conception of the change in Canada's international financial position can be formed by an examination of Table XLVI. In studying the data presented in this table, one should keep in mind Canada's net capital exportation which has occurred in recent years.

It is apparent that between 1930 and 1945 Canada reduced her debt to the United Kingdom by \$1 billion but her obligations to the United States and, to a minor extent, to other countries, increased by approximately \$482.5 million, so that the absolute reduction in debt was about \$518.8 million. The total stood at \$7,095.0 million at the end of 1945. But Canada's investments abroad increased so markedly, by over \$2 billion between 1930 and 1945, that the *net* debt fell by approximately \$2,700 million in the same period. In the light of these facts it would seem that Canada has reached at least the position of a mature debtor country.

TABLE XLVI
CANADA'S INTERNATIONAL INVESTMENT POSITION*
(Millions of Canadian dollars)

	1930	1939	1945
Investment in Canada by			
United Kingdom.....	\$2,766.3	\$2,475.9	\$1,766.0
United States.....	4,659.5	4,151.4	4,982.0
Other countries.....	188.0	286.0	347.0
Total non-resident investment in Canada	\$7,613.8	\$6,913.3	\$7,095.0
Investment by Canada in all other countries	1,496.0	1,865.0	3,715.0
Canada's net debtor position.....	\$6,117.8	\$5,048.3	\$3,380.0

*Source: Department of Trade and Commerce, *The Canadian Balance of International Payments, Preliminary Statement*, 1946, p. 43.

INTERNATIONAL TRADE ADJUSTMENT

Whereas in any year the value of a country's exports may exceed that of its imports (or *vice versa*), in the long run exports pay for imports. That is (assuming no defaults on loans or international gifts), exports tend to equal imports in value. Let us examine the mechanism and process whereby this equality is achieved in a country's balance of payments. This is the problem of international trade adjustment. There are two cases to consider: first, trade adjustment under gold standard conditions, and secondly, under inconvertible paper standard conditions.

Trade Adjustment under the Gold Standard.—When countries are operating on an international gold standard, trade adjustment in the first instance is made by a flow of gold followed by a change in relative price levels, production costs, and import-export positions of the countries concerned. For example, if Country A's purchases abroad exceed its sales to other countries, the value of its currency in the foreign exchange market will fall (i.e. the exchange rate moves against Country A) and gold will be exported. This will reduce bank reserves and cause a contraction of credit in Country A. Consequently, prices and costs of production (if unemployment is to be avoided) fall in Country A. Opposite tendencies, namely, acquisition of gold, increased bank reserves, expanded credit structure, higher prices and costs are operative in other countries.

The result is that Country A becomes a good country in which to buy but a poor country in which to sell. Hence Country A's exports increase and its imports decrease. Thus the value of exports and that of imports tend to an equality at a new level of prices and costs in Country A and the nations with which it deals; a lower level in Country A, higher elsewhere.

If the excess of imports to Country A had been financed originally by borrowing abroad on long-term account, a similar chain of events would have developed. But this time the exchange rate at first would have become favourable to Country A and (unless the funds were spent directly in the country making the loan) gold would be imported. Consequently, Country A would experience a rise in bank reserves, credit, prices, costs, and imports. The reverse trend would obtain abroad. If and when the loan is repaid, the chain of events is reversed.

Trade Adjustment under Inconvertible Paper Standard Conditions.—When countries operate on a paper standard basis, monetary gold does not flow freely to settle temporarily adverse balances of trade, hence we must look for another mechanism of trade adjustment. It is found mainly in the fluctuation of exchange rates. In this case, if Country A's purchases abroad exceed its sales, the value of its currency will decline considerably on the exchange market. This fall in the external value of its currency will reduce imports (because it now costs residents of Country A more to buy abroad) and result in augmented exports. People living in other countries can secure Country A's currency at a low price and with it buy A's goods. Trade adjustment under paper standard conditions is brought about much more quickly than in the gold standard case. Here it is not necessary to wait for a flow of gold, and a change in the reserve, credit, cost, and price structure, all of which takes time. The adjustment is made more or less directly through fluctuations in the exchange rate. As already noted, there would be of course, some change in international prices as a result of alterations in demand for various products.⁶

So long as countries adhere to an international gold standard, the currencies of all nations belonging to the scheme are freely convertible into one another at a fixed rate of exchange. In the pre-1914 period and again between 1925 and 1931, free convertibility was the rule. Under this plan it was possible for Country A to owe Country B on balance and settle by transferring to B its claims on Country C. If C had a credit balance with B (as was

⁶See above, pages 692-94.

frequently the case) a situation of three-cornered exchange existed. Country A's excess imports from Country B were paid for by exports to Country C. Similarly B's deficit with C was met by surplus exports to A. Taking the world as a whole a situation approximating three-cornered trade existed.

But when free convertibility does not prevail, either because the gold standard is abandoned or countries otherwise are unwilling to exchange each other's currencies at a fixed rate, a particular country may run into difficulties in its international economic relations. This was Canada's experience in the so called "dollar crisis" of 1947. In normal times Canada could have her claims to sterling (resulting from net exports to the United Kingdom) converted into American dollars to pay for an excess of imports from the United States. At the outbreak of World War II Canada's official reserves in gold and United States dollars were slightly less than \$400 million. This amount was reduced to a low of \$188 million in 1941. Thereafter, official reserves increased steadily, largely as a result of the Hyde Park agreements and an inflow of capital from the United States. They stood at \$1,508 million in December, 1945, and reached a high point of \$1,626 in July, 1946. After that date official reserves diminished owing to an adverse balance of payments on current account with the United States⁷ and the

7CANADA'S CURRENT BALANCE OF RECEIPTS AND PAYMENTS WITH
THE UNITED STATES*

Figures in \$ millions. Source: Dominion Bureau of Statistics	1929			1939			1945			1946		
	Cre	Deb	Bal	Cre	Deb	Bal	Cre	Deb	Bal	Cre	Deb	Bal
Merchandise trade.....	519	875	-356	344	472	-128	1,134	1,119	+ 15	948	1,378	-430
Freight trans- actions.....	68	103	- 35	46	61	- 15	134	188	- 54	112	178	- 66
Gold.....	37	..	+ 37	184	..	+184	96	..	+ 96	96	..	+ 96
Tourist trade.	184	81	+103	137	67	+ 70	163	81	+ 82	214	131	+ 83
Interest and dividends...	30	202	-172	27	220	-193	44	194	-150	46	250	-204
Other "invisi- ble" items..	61	75	- 14	42	76	- 34	169	128	+ 41	159	241	- 82
Grand total of all current transactions	899	1,336	-437	780	896	-116	1,740	1,710	+ 30	1,575	2,178	-603

*Source: Bank of Nova Scotia, *Monthly Review*, May, 1947.

Cre = Credits. Deb = Debits. Bal = Balance.

failure of Great Britain and other countries with which Canada had a favourable balance to make their currencies freely convertible into United States dollars.

When Great Britain suspended the policy of making sterling freely convertible into American currency Canada had to depend largely on her own holdings of gold and United States dollars to meet her adverse balance on current account with the United States. As the estimated average monthly deficit with that country was \$80 million for the first nine months of 1947 and threatened to total \$1 billion by the end of the year, the government adopted measures in November, 1947, for the purpose of increasing exports to and (especially) decreasing imports from the United States. As Canada's supply of gold and United States dollars, amounting to \$1,245 million at the end of 1946, would be reduced by \$500 million during 1947 if the trend continued, the government adopted the so-called "Austerity Programme." The chief feature of this programme was the restriction on imports from the United States. It should be observed that as regards Canada, this was an exchange crisis, not a trade crisis. The value of Canada's exports still exceeded that of her imports. But the currencies of the countries with which Canada had a credit balance could not be converted freely into American dollars.

The International Monetary Fund.—International trade adjustment under gold standard conditions involved certain difficulties. To the country losing gold it frequently meant a rather painful process of reducing prices and costs. The country gaining gold suffered the disturbing effects of rising prices and costs. As the economies of modern countries became less and less flexible, the process of trade adjustment became ever more difficult. After resuming gold payments in 1925, the United Kingdom experienced great resistance to the scaling down of prices and costs, had a large amount of unemployment, and finally decided to abandon the gold standard in 1931. On the other hand, free exchange rates have a retarding effect upon international trade because business men hesitate to make future commitments when foreign exchange is subject to wide and uncertain fluctuations. The International Monetary Fund is designed to overcome, within limits, the drawbacks of both the gold standard and inconvertible paper schemes.

The International Monetary Fund was organized as a result of the conference held at Bretton Woods, N.H., in 1944, which was

attended by representatives of forty-four nations. Briefly the plan is as follows: The capital of the International Monetary Fund is \$8.8 billion in terms of United States dollars, which in turn are linked to gold. Each member country is assigned a quota in conformity with its estimated economic importance. The quota represents each member country's contribution to the Fund. The money thus received from a particular country can be lent by the Fund to another country (or countries) which may need the given country's currency to meet a temporary adverse balance of payments. By agreement with the Fund, the exchange rate of each member's currency is fixed in relation to the American dollar. This is the *par value* and looks to stability of exchange rates. Members are permitted to vary the value of their currencies by 10 per cent from the initial par value by simply notifying the Fund. A further variation of 10 per cent can be made only with the concurrence of the Fund. The quota is paid to the Fund as follows: 25 per cent of quota (or 10 per cent of the country's gold holdings, whichever is the smaller) must be paid in gold and the balance in the country's own currency. Thus the Fund comes into possession of a large quantity of gold and currencies of member countries, which constitutes its lending resources.

Members of the International Monetary Fund are required to use the regular channels of foreign exchange dealings as far as possible. They resort to borrowing from the Fund only when the desired foreign currency is not obtainable at the usual sources. The Fund is prepared to furnish the needed exchange in an emergency. It also provides facilities for research in international finance and sets up the machinery for international consultation. Furthermore, it provides the means for an orderly adjustment of exchange rates when needed to correct a "fundamental disequilibrium" in a country's balance of payments. At the same time, the Fund attempts to avoid competitive currency depreciation on the part of countries which by this means might seek to secure an advantage in trade.

A brief consideration of Canada's relation to the Fund will help to make clear the nature of the organization and functions of this new international monetary institution. Canada officially became a member on December 27, 1945. Canada's quota is \$300 million. This was paid by \$75 million in gold (25 per cent of quota) and the balance \$225 million, in Canadian currency (\$31 million by deposit

with the Bank of Canada and \$194 million by interest bearing demand notes of the Canadian government payable to the Fund). By these means Canada placed at the disposal of the Fund \$300 million which that organization can lend to other members temporarily in need of Canadian currency to meet their short-term trade obligations.

But suppose Canada wants to borrow the currency of another country (e.g. United States dollars to settle an adverse balance of payments with that country) from the Fund, what procedure would be followed? Every member may borrow annually up to 25 per cent of its quota for a period of five years. Then its borrowing power, its line of credit with the Fund, is exhausted. Suppose Canada borrows to the limit of her capacity, what steps would be taken? Before securing a loan Canada must pledge an additional amount of Canadian dollars (which are kept at a fixed value in terms of American money) equal in value to the sum of foreign currency secured. During the first year, therefore, Canada would pledge an extra \$75 million in Canadian dollars. The total amount of gold and Canadian currency received from Canada by the Fund now would be \$375 million, i.e. the \$300 million quota plus \$75 million as additional security for the amount of American dollars (or the equivalent in other currency) borrowed from the Fund. Granting that a like amount were borrowed the second year, the Fund would have \$150 million of Canadian dollars in excess of Canada's quota. If Canada continued to borrow 25 per cent of her quota for the succeeding three years (i.e. to the end of the five-year period) the total amount borrowed would be \$375 million and her capacity to secure exchange from the Fund would be terminated. In general, the amount which any member country can borrow from the Fund is 100 per cent of its quota plus its gold contribution. The borrowing country must pay to the Fund a rate of interest which increases with the size and duration of the loan. If a country which has borrowed from the Fund subsequently experiences a rise in its holdings of gold and foreign exchange, it must use a portion of this increase to buy back that part of its currency held by the Fund which is in excess of its quota. In this way provision is made for the repurchase of currencies so that member countries will not be permanently indebted to the Fund.

Since all members of the International Monetary Fund agree

to maintain their currencies at a fixed value in terms of gold or American dollars, the advantage claimed for the gold standard (fixed exchange rates and consequent engendering of business confidence) is achieved without an international gold flow. Through the Fund's lending operations short-term trade adjustment is accomplished without the painful process of readjustment in credit, prices, and costs incident to a flow of gold. But what happens if a country consistently has an adverse balance of payments on current account? Unless provision were made for such a case the country in question soon would exhaust its borrowing privilege at the Fund and might be forced to depreciate its currency or impose import restrictions, measures which are contrary to the letter and spirit of the International Monetary Fund agreement. The Fund does provide a means of correcting a "fundamental disequilibrium" in a given country's balance of payments. The correction is made by an *orderly adjustment of exchange rates*. That is, after due consultation with the Fund, a country is permitted to adjust the external value of its currency to the point where the tendency to a perpetual adverse balance of payments on current account is overcome, up to a 20 per cent discount from the original par. But the Fund does not permit its members to engage in *competitive depreciation* as a means of seeking an advantage in trade.⁸

By the means outlined above, countries belonging to the International Monetary Fund hope to achieve the advantages of the gold standard and at the same time avoid its disadvantages. During the "transition period," however, members are allowed to exercise exchange control. If at the end of three years exchange control exists in a given country, the Fund will report on the control situation. In case controls extend beyond five years, the country concerned and the Fund will formulate a programme for their removal. In so far as at the time of writing we are still in a "transition period," the Fund as yet has not had an adequate opportunity to demonstrate its usefulness. The first exchange operations took place in May, 1947, when the Fund sold \$25 million United States to France and \$6 million United States plus £1.5 million sterling to the Netherlands.⁹

⁸On January 25, 1948, despite objections from the International Monetary Fund, the government of France lowered the official par value of the franc by 44.4 per cent. As a result, the United States dollar will be worth 214.4 francs, as against the old rate of 119.1 francs.

⁹A further sum of \$25 million U.S. was sold to France in June, 1947. See International Monetary Fund, *Annual Report, 1947*, Appendix VII.

**INTERNATIONAL BANK FOR RECONSTRUCTION
AND DEVELOPMENT**

Whereas the International Monetary Fund was designed to take care of international finance of a temporary character, the International Bank for Reconstruction and Development, also established by the Bretton Woods agreements, is organized for the purpose of facilitating international borrowing and lending on a long-term basis. Nations adhering to the International Monetary Fund are also members of the International Bank for Reconstruction and Development. The Bank's capital is \$9.1 billion United States dollars. Canada's quota in the Bank is \$325 million. Of this amount \$65 million has been paid in (\$6.5 million in United States money and \$58.5 million in Canadian currency). The balance \$260 million is subject to call to meet obligations of the Bank.

In order to expedite long-term capital movements the Bank may (1) make direct loans from its own capital, (2) make direct loans from funds raised by issuing its own securities in private capital markets, and (3) guarantee loans made by private sources to foreign borrowers. So far as possible the Bank avoids competition with private capital markets. It tries, nevertheless, to make loans available to worthy borrowers who cannot raise the desired funds in private sources at a satisfactory interest rate. In no case, however, is a loan made or guaranteed by the Bank without a thorough investigation as to the purpose of the loan and the means of meeting interest and retirement payments. Up to September 11, 1947, the Bank had made two large loans; \$250 million to the Credit National of France, and \$195 million to the Kingdom of the Netherlands.¹⁰ Both applicants asked for much larger amounts, the former requested \$500 million and the latter \$525 million. Before the above date, the Bank had received applications for loans from seven other countries.¹¹

The International Monetary Fund and the International Bank for Reconstruction and Development doubtless will play important roles in the financing of commerce among nations. But their ultimate success depends upon stable political conditions, considerable freedom of trade, and a willingness on the part of their members to adhere to the regulations imposed by these institutions.

¹⁰International Bank for Reconstruction and Development, *Second Annual Report, 1946-1947*, p. 18.

¹¹*Ibid.*, p. 19.

The Fund and the Bank must not be regarded as permanent correctives for any underlying causes of disequilibria in international trade, such as changes in relative costs of production and prices resulting from technical improvements, new sources of raw materials, and other innovations. The Fund and Bank can facilitate but should not attempt to counteract fundamental adjustments in international economic relationships.

INTERNATIONAL TRADE AND NATIONAL INCOME

If a country were entirely self-sufficient economically, i.e. not engaged in international commerce and having no financial relations with other countries, its national income clearly would be the money value of goods and services produced at home within a given period. This would be true also when international trade prevailed if the value of goods exported just equalled that of imported commodities. It is significant, however, that foreign trade based on either absolute or comparative advantages would increase the volume of goods available for consumption in the countries concerned. That is, foreign trade increases the real national income. The money income might not be affected; except, as we shall see, in cases where external trade is essential to full employment.

The above statements regarding domestic production and national income must be modified in a situation where a given country's international financial relationships are such that it is either (1) entitled to receive interest, dividend, and rent payments on balance from abroad or (2) owes such payments on balance because other nations have relatively large investments in said country. If a country is entitled to receive payments on balance from its foreign investments, its national income is correspondingly augmented. The current amount of goods and services at its disposal exceeds the volume of domestic production. On the other hand, if a given country owes on balance, its national income is less than the quantity of home output. Part of domestic production must go to pay net interest and dividends abroad. Obviously that particular portion of home output cannot be consumed or added to capital equipment within the country.

In general it may be said that *national income equals domestic output plus net income from foreign assets*.¹² In the first case mentioned in the preceding paragraph, net income from foreign assets

¹²See L. V. Chandler, *A Preface to Economics* (New York, 1947), pp. 120-3.

was positive; in the second case it was negative. Canada on account of heavy interest and dividend obligations to outside countries is in the second category (see Balance of Payments, pp. 697-700). This does not mean, however, that Canada's national income is less than it would have been in the absence of foreign borrowing. The reverse is true. Importations of capital in times past have enabled Canada to build up her productive facilities and thus augment the flow of goods and services at the disposal of her citizens.

A country like Canada, whose prosperity depends upon a large volume of international commerce is, from an economic viewpoint, in a very vulnerable position. Whereas the foreign trade of the United States in 1938 (peace-time) amounted to only 6 per cent of national income, the external trade of Canada accounted for 37 per cent of national income.¹³ The dependence of Canada upon international trade is obvious. Canada has an "exposed" economy. If anything occurs to decrease the value of her exports, national income in Canada is drastically reduced. The following table illustrates the close relation between exports and the national income in this country.

TABLE XLVII

VARIATIONS OF CANADA'S INCOME AND EXPORTS*
(Millions of dollars of the given year)

Year	National Income Received	Exports of Merchandise and Non-monetary Gold
1928	4,585	1,376
1929	4,728	1,186
1930	4,544	898
1931	4,058	641
1932	3,453	558
1933	3,149	609
1934	3,267	760
1935	3,493	841
1936	3,676	1,066
1937	4,082	1,138
1938	4,134	994

*Source: Gilbert Jackson and Associates, *Exports and National Income of Canada* (Toronto, 1945), p. 1.

¹³E. M. Patterson, *An Introduction to World Economics* (New York, 1947), p. 262.

The data in Table XLVII reveal two characteristics of the Canadian economy: (1) great fluctuations in the size of the national income and (2) a close correlation between the size of national income and the value of exports. National income fell from a high of \$4,728 million in 1929 to a low of \$3,149 million in 1933, a decline of \$1,579 million, or over 33 per cent. By 1938 national income had risen to \$4,134 million, or an increase in excess 33 per cent above the figure for 1933. Such variations in national income within short periods expose the Canadian economy to great stresses and strains, placing a particularly heavy burden upon primary industries producing for export markets.

From an examination of Table XLVII it is evident that changes in the value of Canada's exports in any given year are followed by corresponding alternations in national income in the following year. Mr. Gilbert Jackson and his associates found that in the period from 1923-4 to 1938-9, the correlation between these two series was amazingly high.¹⁴ They estimate "that over a period of years \$100 of exports is necessary for the realization of \$380 of National Income Received."¹⁵ But the relationship varies with the degree of employment prevalent in the economy. As "full employment" is approached the effect of \$100 of exports diminishes.

The close correlation is explained by the fact that three out of eight persons of our working population are associated with the production of primary products.¹⁶ When the volume of export trade is high, the purchasing power of such people is enhanced and they buy the goods of domestic industry. The multiplier and acceleration effect can be seen here. Conversely when the volume (and value) of exports declines, it is reflected in a reduction in the volume of domestic transactions during the following year. In brief when the value of exports is high, the purchasing power accruing to persons engaged in the primary industries is diffused through the economy, thus swelling the national income. A fall in the value of exports has the opposite effect. Consequently, to countries like Canada with exposed economies, the maintenance of a high volume (and value) of exports is a matter of supreme importance.

¹⁴Gilbert Jackson and Associates, *Exports and National Income of Canada* (Toronto, 1945), p. 1. (The Pearsonian coefficient of correlation between the two series was .923.)

¹⁵*Ibid.*

¹⁶*Ibid.*, p. 2.

CHAPTER XXXIV

GOVERNMENT DISCRIMINATION IN INTERNATIONAL TRADE

A PART of government interference in international trade derives from politico-military considerations. Especially is this true of times of rampant nationalism like the present. The requirements of war preparations take precedence over everything else and to that end the channels of commerce that bring in essential war materials must be kept open and the national economy must be cudgelled into self-sufficiency almost regardless of the well-being of the population as expressed through abundance of economic goods. In view of this the principles making for increased income through trade are consistently flouted.

A second strand of interference is illustrated by the Ottawa Agreements of 1932 between different members of the British Empire. These bi-lateral arrangements have their essential economic purpose coloured with political sentiment. Considering that these other goals are present it is in a sense beside the point to assess government practices in terms of purely economic values. In another sense, however, there is abundant reason for doing so: we should know something about the economic cost of political and sentimental manoeuvring.

The purpose of this chapter is to attempt an evaluation of all government activities in so far as they involve interference with the free flow of international trade. Up to here we have accepted the whole field of influences that play upon international trading as we have found them. No judgment or criticism has been brought to bear on any item or part. The principle of comparative advantage (viewed chiefly as a business concept) has been shown in its place among other influential forces. We are now to present it as a social or national concept claiming sovereign rights and intolerant of all limitations through political activity. We may picture the result in that condition of industry and trade that would exist apart from all present and future government interferences or discriminations favourable to this group or that, or for that matter,

any government interference directed toward the improvement of the whole nation. Comparative advantage thus conceived of describes the situation as it would be under the rule of economic law exclusively. It is the picture, contemplated with favour by the believer in "free trade." As he sees it government activities of the past have distorted the pattern in various particulars but with these withdrawn, industry and trade would re-arrange themselves in accordance with the basic economic forces. The principle of *natural* comparative advantage will have reasserted itself.¹

It is with the second concept that we are chiefly concerned in this chapter, and with any departures that are and that should be permitted from this basic condition, and how they may best be accomplished. As long as we were concerned with explanation, we had no occasion to suggest what *should be* but when it comes to considerations of public policy we begin a frank evaluation of institutions and laws to see what their total results may be. Altogether we have developed an industrial and trading complex far from the natural economic condition. In it are featured tariffs, special duties, "drawbacks," quotas, subsidies to home producers, "tying arrangements," assistance to export monopolies, conscious control of foreign exchange rates, and reciprocal trade agreements. Many of these have been developed under the influence of pressure groups within particular countries and are not the result of conscious political evaluation and concern for welfare of the whole nation. On this continent especially and during the century before World War I the chief motivation toward such legislation was the protection of home industry against the competition of foreign goods. Since 1918, as we have intimated, considerations other than economic and other than those favouring particular industries have often dominated. Almost forgotten is the point of view of the welfare of the whole international society. The free trader's position is that all these interferences are economically wrong. They simply carry us away from Nature's best intention as revealed in the distribution of resources and peoples. If natural trading is productive of welfare within a country, he asserts, it is equally beneficial if allowed to flow unrestricted between countries. And the benefits

¹How permanent the distortion might be or how long it would take the "Natural" condition to re-establish itself, it is instructive to speculate upon in the particular instance. Suggestive also are the connotations of the word "natural"—what is to be included in, and what excluded from it.

of freedom accrue alike to the individual nations participating, and to the larger society. The principles of natural absolute and comparative advantage should hold sway. To the degree that they are disregarded there must inevitably be less wealth for all and for each.

The arguments of those who would make a large use of government in controlling these matters are partly mercantilist, partly nationalist, partly protectionist, and lastly expansionist. The political reasoning of the nationalists and imperialists does not concern us. The economic instruments for carrying out their aims are part of the complex story ahead. The mercantilist doctrine of favourable balance of trade is still a powerful force. In so many places the tendency is to act on the assumption that imports are an evil to the receiver, and that only exports are an unalloyed good. Artificial interferences in keeping with this philosophy permeate every phase of foreign trade. The wonder is that the essential currents of commerce survive to the degree that they do in the face of so many restrictions and steerings. The truth is, however, that old channels have been very considerably choked and the contents of commerce forced through others less adequate and less natural over much of the world during the post-war period. The struggle is now being made under the lead of liberal American and British statesmen to reverse this movement of restriction and achieve again a closer approximation to the natural flow.

Protectionist Arguments.—Probably the ablest plea ever put forward for protection is the *infant industry argument* which stresses the dynamic aspect of a nation's life. As cleverly presented by Friedrich List a century ago, states are to be likened to families each of which has young sons. One family keeps its boys at home and as a result of their additional labours the whole group is able to live in a condition of comparative affluence. Another, although it involves sacrifices to the whole family in the present, forgoes the advantage of the sons' labours in order to keep them at school. The time will come when, as a result of the education, the second family will outstrip the first in its productivity and wealth. These respectively represent the conditions of two nations, one of which allows competition with foreign lands to take its natural course, and production to develop incidental to this condition; the other sacrifices in the present through giving artificial protection to young industries, paying for their products the high prices necessary to enable them to get started, in the expectation that later they

will be more than able to meet the foreign competitor. In view of our knowledge that decreasing cost takes place as larger unit output per business unit, and per industry, is featured, we can appreciate the strength of this argument. Two ever-present dangers, however, lurk in its application. First, to continue in terms of the analogy, no family would be *economically* justified in spending its substance in trying to educate any low intelligence sons that it might include: the boys should be selected in relation to their ability to profit by the training. Second, *economically* speaking, the sons should stop going to school some time and go to work for self-support, instead of continuing indefinitely on the paternal allowance.

As a natural sequitor to the above comes the *vested industries argument*. The plea here is that, fostered by protection, capital has been invested in durable, specific-use capital forms, goodwill has been established, and relations developed with other industries. To withdraw protection and lay the industry open to world competition that it cannot meet would involve not only the investors but the whole dependent community in loss. This argument again cannot be lightly dismissed. Those who have investigated these matters are emphatic about the close interdependence that develops in time among a group of industries. Especially is this true of the integrated phases. Tariffs and drawbacks are developed, in fact, with a consciousness of interrelations.² A withdrawal of protection to the motor car industry in Canada could only be considered in relation to the effect also on the automotive parts and rubber tire industries and beyond that again on the iron and steel and cotton and various other industries.

Two rather futile arguments that have resounded on the hustings before elections in both the United States and Canada have been the *home market argument*, and the contention that protective tariffs are necessary to *equalize the cost of production at home and abroad*. We need not delay with these for long. Obviously the latter involves the complete renunciation of the principles of mutual comparative advantage. Comparative costs, moreover, between two countries are in most instances extremely hard to determine and there is usually the allied question of whose costs are to be taken as representative in a field where there are many producers in each country. The home market argument, developed mainly

²Drawbacks are percentage allowances on duties paid on materials, provided (usually) the product has a sufficiency of home country content when it is finished.

on this continent for the consumption of farmers, while less naïve, suggests also a lack of understanding of trade principles. By special protection to urban industries it may be possible to build up a greater paid working population and consequently a bigger home consumption of farm products. But the difficulty with this is that the total market is likely to be less, for the country is being led by the tariff to carry on lines of production for which it is less fitted than it otherwise would. (The assumption is that its people would keep equally occupied in other lines without the protection.) A policy of restriction of imports, furthermore, is almost certain before long to reap its harvest in a fall in exports, for, as we have seen from our examination of the balance of international payments above, the two are closely interrelated. For nations that are dependent in large degree upon foreign markets to absorb the major part of their great agricultural staples, such a policy might well be disastrous. Even for Great Britain where the policy today is primarily one of restricting imports by means of tariffs and quantitative limitations upon the intake of certain products and internal subsidies to home growers, the result is apparently showing in her inability to maintain her much desired markets abroad.³ Where the home market argument is put forward in a world distraught by political uncertainty on grounds of greater security for future trade through susceptibility of control, there may be a stronger case for it. It should be weighed, however, with due appreciation of its defects.

Other protectionist arguments are directed particularly toward labour. The bolstering of industry by tariffs or subsidies, it is contended, will make for *higher wages and greater employment*. The answer to the first comes readily enough. The effect of a tariff is to raise prices. The particular industries benefited by the duties will be able to pay higher wages but to the degree that the increased prices involve goods that workers must buy they are injured as consumers. The general statement of result will be that real wages of most workers in industries directly protected may well be increased but that real wages of all other workers will be lowered. To give it theoretical expression we may affirm that wages are measured by the marginal productivity of the various types of labour. That which increases the general productivity of industry is likely to reflect favourably on the marginal pro-

³See Lionel Robbins, "The Export Problem" (Lloyds Bank Limited, *Monthly Review*, July, 1939).

ductivity of different labour groups; that which decreases it is likely to do the opposite. It is conceivable, however, since some industries call more heavily on the labour factor than others, that a different result may be effected through the use of a tariff. If the industry chosen for protection is one that uses large numbers of workers and is by this means enabled to increase at the expense of industries that depend more upon machinery and use of big inventory, this might be the case. Demand for labour would be increased in the total and a larger part of total national product go to labour. That total product itself, however, would be less. Here a distinction may be introduced between tariffs and subsidies as protectionist devices. A subsidy involves more openly the transfer of funds from one group (usually the whole body politic) to another (the subsidized industries). Its bearing upon wages so far as it affects workers in the subsidized industries will be more favourable than with a tariff. Likewise its incidence will fall less heavily upon other workers, depending upon the method of taxation.

The doctrine that the tariff can be used with advantage to reduce unemployment is both wrong and right. Mostly it is wrong. The bolstering of certain industries by enabling them to capture more of the market in this way means more jobs in these but less elsewhere. The latter results from two causes. First, to the degree that these industries charge prices higher than prices of the former corresponding imported products, other industries will have to pay higher costs for their labour which must pay these higher prices as consumers, and also for any materials they may take from these protected firms. Secondly, the limiting of imports will reflect on the purchases of foreigners who formerly bought in this country which means that exports will fall. Altogether the expectation will be that less *total* consumption will develop through turning capital from more productive to less productive channels.

On the other hand, it is very probable, for the same reason as in the wages argument, that through selection of those industries for tariff favours which employ a relatively large amount of labour as contrasted with other factors, i.e. machinery, power, etc., a country could employ more workers. From the purely economic outlook, however, this would be undesirable since it is defeating the principle of comparative advantage as it applies to the country's whole set-up of resources. It suggests too much of the "make work" fallacy long known to students of economics.

More meritorious is the argument for protection to *diversify*

industry and thus provide a greater variety of opportunity for the differing talents found in a population. A country given over almost entirely to primary industries undoubtedly loses on this score economically as well as culturally. The tendency is too, if there are more diversified nations nearby, for such a country to lose valuable youthful elements of its population through emigration.

Nations again that use tariffs and subsidies freely often derive incidental benefits that have never featured in their calculations. Tariffs like those of the United States and Canada have amounted in the total to redistribution of income on a grand scale taking funds from the consumers and turning them over to the producing interests. To the degree that the latter are normally the people who save more copiously and build up capital investment more rapidly than the consuming group would, the country may be brought forward faster as a producing organism at the expense of the present living conditions of the rank and file of its people,—workers, salaried groups, professional men, entertainers, etc. Continuance of this—what might be called a forced development of plant—depends, of course, on the ability to find markets for the output. Doubtless the speed of American development has been in some measure in these terms. It is to be noted that the farmer as entrepreneur and capitalist as well as worker has consistently lost through the arrangement⁴ and for more reasons than the consumers. So likewise has the primary forest industry. The subsidizing of industry by some countries operates in a similar way. If the subsidies are paid out of general taxation, the incidence is as broad as the latter. If they are derived through processing taxes on later or earlier stages of materials in the same industry as has recently come into favour in some countries, the burden is more concentrated. The European effort at forcing exports on foreign markets at the present time through the organization of export monopolies which are enabled to offer favourable prices for their products in the foreign markets while charging higher prices at home is of the nature of a tariff. As compared with subsidies it is less in the open. The home consumer bears the cost without knowing it, while the home producer not so favoured and buying the products of the subsidized industries pays his share, more conscious usually of the discrimination practised against him.

⁴See F. J. Westcott, "An Approach to the Problem of Tariff Burdens on Western Canada" (*Canadian Journal of Economics and Political Science*, vol. IV, May, 1938); also R. G. McQueen, "Economic Aspects of Federalism" (*ibid.*, vol. I, Aug., 1935).

Not the least of the German practices under the Nazi régime in the effort to force exports upon other countries in return for needed foods and raw materials is the use of "blocked marks" in making payments to the Balkan nations. The principle is the same as that of the merchant who issues scrip of his own acceptable as payment for goods bought in his store only. Roumanians, Bulgarians, and Greeks finding themselves with great quantities of these on their hands after German purchases of wheat, oil, and tobacco in the fall months, are compelled under the circumstances to buy things other than those which answer their keenest wants because they have nothing with which to command the goods of other countries. The situation is one that could scarcely be forced upon countries with more open trading relations with the rest of the world and is only maintained through German domination of the rate of exchange between the *Reichsmark* and currencies of these nations.⁵ It can scarcely be considered other than as a condition likely to defeat itself in the long run.

The futility of the greater part of the whole complex of interference and discrimination is seen when attention turns on the impact of tariffs, subsidies, and export favours upon the cost side of the equation. The only way to gain and to maintain foreign markets in a large and continuing way is to get costs down with or below the level of other nations, and this latter purpose is best served by straying not too far from the principles of natural absolute and comparative advantage. Central in the whole complex of costs is the cost of living of the people, for it enters in a large way into the total cost of every industry.

Canadian Protection.—The Canadian arrangements for protection to industry like those of most modern nations are extremely complex. The tariff embraces three levels according to treaty arrangements with other nations or lack of them. The lowest range of duties are directed toward Britain and her colonies and the various sister Dominions. These originated under the bilateral arrangements of 1932 although the principle of British *preference* was extended by Canada to Great Britain as early as 1897. The *general* tariff at the other extreme is the highest range of duties affecting nations with whom the Dominion has no reciprocal treaties. The *intermediate* tariff applies to nations with whom such arrangements have been made and is for the most part

⁵See G. B. Allan Fisher, "The German Trade Drive in South-Eastern Europe" (*International Affairs*, vol. XVIII, March-April, 1939).

uniform to all such. Many of the countries enjoying the middle range duties have achieved that right through having extended to them what is called "most favoured nation" treatment. The duties on three important items (1948) are presented below as an illustration:

TABLE XLVIII

	General	Intermediate	Empire Preference
Manufactures of iron and steel .	35 per cent	25 per cent	10 per cent
Manufactures of brass	30 per cent	20 per cent <i>less</i>	20 per cent <i>less</i>
Manufactures of cotton	35 per cent +4 cents per lb.	10 per cent 25 per cent	10 per cent 22 per cent <i>less</i> 10 per cent

It is evident that despite the recent trade agreements negotiated at Geneva, a considerable degree of preference is given to commodities imported from Empire countries. On the other hand, there are some articles, e.g. brass manufactures, where the intermediate tariff is the same as the British preference rate. As tariff schedules in many instances apply to raw materials and semi-finished goods, the measure of protection which a domestic producer receives depends not only on the duty applicable to finished commodities, but also on that which he must pay on imported materials.

Canadian national commercial policy for seventy years has been consistently one of protection extended chiefly but not exclusively to manufacturing.⁶ The average of duties has ranged from moderate to fairly high, according to whether Liberal or Conservative Governments were in power at Ottawa, and reached its all-time high during the early nineteen-thirties. In comparison with tariff walls in post-war Europe, however, the Canadian imposts are relatively low. In contrast with the special mutual concessions among Empire countries, the trading relations between Canada and the United States in spite of their great importance have been restrained throughout by the high general tariffs directed each against the other. An attempt by the Canadian Liberal Administration to break these down by a general reciprocity pact in 1911

⁶National policy has featured getting revenue for railway development. See H. A. Innis, *Problems of Staple Production in Canada*, (Toronto, 1933).

resulted in the overthrow of the Laurier Government. After a quarter-century these aims have now been partially fulfilled in the trade treaty of 1938, and in the Geneva Trade Pact of 1947.

General principles governing the trading policy of a nation in its relations with others should include the following:

(1) Mainly, policy should stress the development of the country's best natural advantages that it may fulfil its part in a world division of labour. What it can do best in the world of nations the world will likely seek from it in the long run.

(2) The international view-point should be upheld even if it involves minor costs temporarily. Post-war nations stand too much as battling business units each well integrated through government assistance devices and controls and each intent upon holding its own markets and getting as much of other markets as possible. Competition tends to become more and more ruthless in the areas that lie beyond domestic trading, where no government is able to call the actors to account. Business practice gets harder and less compromising. Production of wealth is sacrificed to playing for position. Ablest producers are barred from markets rather than undersold. Consumers in all countries grow poorer as they confront high prices in their home markets. By millions they have no access to the goods that producers somewhere would like to sell them. It is business at its worst without regulation.

(3) Policy should be directed toward building industry on the great permanent resources of a country. An economy built around perishing resources is bound to be of temporary greatness. Later adjustments are painful and costly. Likewise an economy should be shaped in relation to trade requirements based on lasting needs of other peoples and with countries lying in natural trading relation to the home country, rather than being arranged to fill temporary wants with distant lands for immediate reasons political or otherwise.

(4) An economy should not be developed unduly around one or a very few commodities whose reception in the export market is likely to vary uncontrollably in a changing world.

(5) In the conscious development of an economy attention should be shown to the distributive aspects as well as to production as various industries are considered

Trade Regulations in Wartime.—After the outbreak of war in 1939, the belligerent nations found it necessary to make special regulations with reference to their foreign trade. Owing to the

necessity of purchasing huge quantities of war materials from the United States, Canada's unfavourable balance of payments with that country was enhanced. The question of payment was made extremely difficult for two reasons. In the first place, as a result of exchange restrictions imposed by the United Kingdom, it was impossible for Canada to convert her sterling balances into United States dollars. In the second place, Canada could not secure a loan from the United States through the regular channels because Americans were forbidden by law to lend to belligerents. But it was imperative that measures be taken to solve the problem.

The solution to the Canada-United States balance of payments difficulty was found (1) in trade and exchange restrictions on Canada's part, and (2) co-operation between the two countries.⁷ In June, 1940, Canada imposed a war exchange tax of 10 per cent ad valorem on all goods imported from countries to which British preference tariff rates did not apply. This, coupled with a 10 per cent depreciation of the Canadian dollar in terms of American currency, reduced the purchasing of non-essentials from the United States. The War Exchange Conservation Act of December, 1940, prohibited the importation of goods from countries outside the sterling area except under special licence. This Act was amended in June, 1941, by greatly increasing the margin of preference on British goods. These special concessions to British products were terminated in 1947 at the Geneva Conference on World Trade.

Measures designed to increase Canadian exports to the United States while at the same time permitting Canada to draw upon American sources of vital raw materials were devised as a result of the Hyde Park Agreement, April, 1941, the establishment of the Joint War Production Committee of the United States and Canada, and the instituting of the Mutual Aid Program for Great Britain.

Subsidies.—One significant feature of Canada's wartime foreign trade regulations was the paying of subsidies on certain imported articles. This was part of the internal price control programme, but it affected external trade. The placing of an overall ceiling on retail prices necessarily narrowed profit margins as costs of production increased. In order to insure an adequate supply of commodities deemed to be essential, the government agreed to pay a subsidy to domestic producers and importers of articles

⁷Cf. O. J. McDiarmid, "Canadian Tariff Policy" (*Annals of the American Academy of Political and Social Science*, Sept., 1947).

coming within this category. Rising prices abroad tended to make business ever less profitable to importers who were compelled to sell their goods at the Canadian ceiling price. In cases of desirable imports the government gave assurance that "appropriate subsidies would be paid provided the importer exercised sound business judgment as to price and quantities imported."⁸ The subsidies were paid by the Commodity Prices Stabilization Corporation which was the fiscal agent of the Wartime Prices and Trade Board. The funds, of course, were derived from the proceeds of taxation. Hence the distribution of the burden of subsidy payments depended upon the tax structure. In any case, import subsidies encouraged the inflow of goods from abroad which otherwise would have been unavailable to Canadians under the price-ceiling programme.

The regulations and agreements outlined above were drafted to meet an emergency. They were not intended to become part of a permanent peacetime policy. Consequently, there was a gradual relaxing of controls when conditions changed, particularly after the cessation of hostilities. The War Exchange Conservation Act was repealed in August, 1944, and the war exchange tax was abolished in October, 1945. The scheme of granting import and export permits tended to become ever less comprehensive, and the list of commodities on which import subsidies are paid has been drastically shortened. But the trend toward a lessening of trade restrictions has been arrested temporarily by the "austerity programme" of 1947.

The International Trade Organization.—The utilization of tariffs, quotas, subsidies, and other governmental interferences with international trade is a form of economic warfare. In fact it is closely related to political strife. Hence a prerequisite to world peace would seem to be the removal, or at least a drastic reduction, of artificial impediments to world trade. The International Trade Organization is designed to curtail and, if possible, eventually eliminate, economic warfare. This it hopes to accomplish by having its members undertake certain obligations aimed at the ultimate abolition of trade restrictions among nations.

The draft charter of the International Trade Organization, first proposed by the United States State Department,⁹ was drawn up in London by delegates of the chief trading nations conferring

⁸K. W. Taylor, "Canadian War-Time Price Controls" (*Canadian Journal of Economics and Political Science*, Feb., 1947, p. 90).

⁹United States State Department, *Proposals for Expansion of World Trade and Employment*, November, 1945.

there in the autumn of 1946. This preliminary document was revised at the Geneva Conference where the "Preparatory Commission of the United Nations Conference on Trade and Employment" met in 1947. Representatives of seventeen nations participated in the deliberations and drew up a charter which was further considered at the World Conference held later in Havana.¹⁰ This latter conference was designed to give the charter its final form and by appropriate action to bring the International Trade Organization into being. A detailed description of the Organization is beyond the scope of this book. Therefore, a brief sketch only will be attempted here.

The charter of the International Trade Organization "is essentially a code of international economic conduct."¹¹ It stipulates certain basic obligations to which all signatory powers will be committed. These include the following undertakings (subject to specific exceptions) of each member:

1. To confine trade restrictions to import duties or export duties, and to negotiate with other members for their reduction.
2. To abandon all forms of trade discrimination against other members.
3. To take whatever action is available to maintain full employment at home, but to avoid shifting the unemployment burden to other members.
4. To cooperate in the economic development of undeveloped areas in the interest of general world prosperity:
 - (a) On the part of developed countries by refraining from the imposition of unnecessary obstacles to the export of capital and technology;
 - (b) On the part of undeveloped countries themselves, to assure fair treatment of international investments.
5. In general, to consult before taking any unilateral action that might injure the trade or prosperity of another member.¹²

It will be seen that this world trade charter is based upon three main principles.¹³ The first is that as quickly as possible all barriers to international commerce will be reduced by multilateral treaties. The second is that there shall be no discrimination (e.g. quotas, and special price concessions) among members of the organization. The third is that all nations shall undertake to promote a high level of employment at home by methods which do not react adversely on their neighbours (i.e. they would refrain

¹⁰January, 1948.

¹¹United States Department of Commerce, *Survey of Current Business*, December, 1947.

¹²United States Department of Commerce, *Survey of Current Business*, December, 1947, p. 19.

¹³See Bruce Hutchison, *The World Trade Charter*, Winnipeg Free Press Pamphlet, no. 13.

from imposing tariffs, depreciating their currencies, and resorting to similar devices to combat an economic recession). Any plan is to be commended which points to multilateral trade treaties (agreements involving several countries, and whereby any concession granted by one nation is automatically extended, through the most-favoured-nation clause, to other parties to the treaty), elimination of discrimination, and the maintenance of full employment without adopting a "beggar my neighbour" policy. Therefore from an economic viewpoint the International Trade Organization is to be endorsed.

There are, however, "escape clauses" which permit members to employ "special regulations" during the transition period or when they are confronted with certain economic strains specified in the charter. The charter has been criticized on the grounds that it is merely a collection of escape clauses.¹⁴ As each nation is judge of its own cause as to what constitutes economic strain, there is great danger of circumventing the purpose and spirit of the charter. If one country decides that an emergency exists and employs special means to meet it, all the other nations can do is appeal to the International Trade Organization to review the case and ask permission to use retaliatory measures. Nevertheless, the proposed scheme is a long step in the right direction. It should be pointed out, however, that the success or failure of the plan depends to a great extent upon the willingness of important countries, particularly the United States, to expand imports relative to exports.¹⁵

Geneva Trade Agreements.—The spirit of the International Trade Organization was implemented when twenty-three nations, including Great Britain, United States, and Canada, signed, on October 30, 1947, a series of multilateral trade agreements. This action has been called the "most sweeping tariff reduction in history."¹⁶ It affects 45,000 items each either lowered or frozen at its present level. The agreements call for the elimination of quotas, import licences or permits, limit the rights of nations to subsidize their exports, and require liberalization of customs procedures. The "most-favoured-nation" clause is accepted by all.

¹⁴John H. Williams, "International Trade with Planned Economics: The I.T.O. Charter" (*Proceedings of the Academy of Political Science*, May, 1947, p. 39).

¹⁵*Ibid.*, p. 46.

¹⁶Facts on File, Nov. 16 - Nov. 22, 1947, p. 367.

The United States, a key-country, granted tariff concessions on products which accounted for imports into the United States from all countries valued at \$1,766 million in 1939. Duty-free bindings account for \$1,130 million of this total, \$129 million represented bindings of existing duties, duty reductions on the remainder ranged all the way from 25 per cent to 50 per cent. The cuts on 3,500 items will bring the United States tariff level down to 15 to 16 per cent of the value of imported goods. This is approximately the same situation as prevailed under the low Underwood Tariff of 1913. In return the United States obtained major concessions from the United Kingdom, Canada, Australia, France, and the Benelux customs union (Belgium, Netherlands, and Luxemburg). The concessions received by the United States from all other signatories affect items which accounted for \$1,500 million worth of American exports in 1939.

Canada and the Geneva Trade Agreements.—In her trade negotiations at Geneva, Canada concluded agreements with countries carrying on over two-thirds of the world's commerce. In general these pacts tended in the direction of freer trade. The most important agreements, of course, were those with the United Kingdom and the United States, countries with which Canada normally carries on about 75 per cent of her foreign trade.

One of the most significant changes affecting Canada involved the system of imperial preferences. Traditionally Canada has supported the right of each country within the system to negotiate alterations up or down as the occasion required. As a result of the Ottawa agreements in 1932, Canada lost that right so far as items on the preference list were concerned. She won it back at the Geneva Conference. As a prelude to negotiations Canada suggested that the whole scheme of preferences be revised with a view to freeing members from existing obligations while, at the same time, retaining the preference principle. This suggestion was accepted by the other members. As a result, Canada was released from the "bound margins" clause. This provision stipulated that regardless of any concessions Canada might make to other countries involving items on the preference list, certain specified margins of preference had to be maintained in favour of the United Kingdom. This stipulation was abolished at Geneva. A new preferential agreement was made with the United Kingdom involving tariff reductions in Great Britain's favour and the binding of existing duties over a wide range of items. Presumably, as time

permits, similar agreements will be made with other commonwealth countries.

With reference to Canadian-United States trade, an arrangement was made providing for a considerable enlargement of the area of reciprocity between the two countries. Canada got concessions on 90 per cent of her dutiable exports to the United States. The Americans made substantial reductions (mostly 50 per cent) in their tariffs on primary Canadian farm products, fish, lumber and base metals. Furthermore, they agreed to the "binding against increase" of hundreds of items on the United States customs tariff. Canada, on her part, agreed to a reduction of from 15 per cent or 20 per cent in the average tariff on dutiable goods entering Canada from the United States.¹⁷ By proclamation on December 14, 1947, President Truman made the United States tariff concessions as applied to Canada and several other countries effective as at January 1, 1948. Final approval, of course, will have to be given by Congress if the pacts are to remain valid. Canada's temporary "austerity programme" prevented the Canadian concessions from becoming effective on the same date.

Conclusion.—The proposed International Trade Organization and Geneva trade agreements constitute a long step in the right direction. The International Trade Organization requires that in the main *restrictions on international commerce shall be limited to tariffs* and looks to a reduction of these as time elapses. Members of the organization are to accord one another most-favoured-nation treatment, although, as we have seen, limited preferential rates are allowed. Assuming the major trading nations join the International Trade Organization, its success will depend upon the good faith (very limited use of the "escape" clauses) and co-operation of its members. One significant, though not surprising, fact causes some concern for the future expansion of *world* commerce. Russia is not a party to the trade agreements nor was she represented at the Havana Conference.

¹⁷*Financial Post*, November 22, 1947, pp. 1-2.

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